Manual No.'14•SRK-T-159

RESIDENTIAL AIR-CONDITIONING TECHNICAL MANUAL & PARTS LIST

INVERTER WALL MOUNTED TYPE RESIDENTIAL AIR-CONDITIONERS

(Split system, air cooled cooling only type)

SRK10YN-S
SRK13YN-S
SRK18YN-S

MITSUBISHI HEAVY INDUSTRIES, LTD.

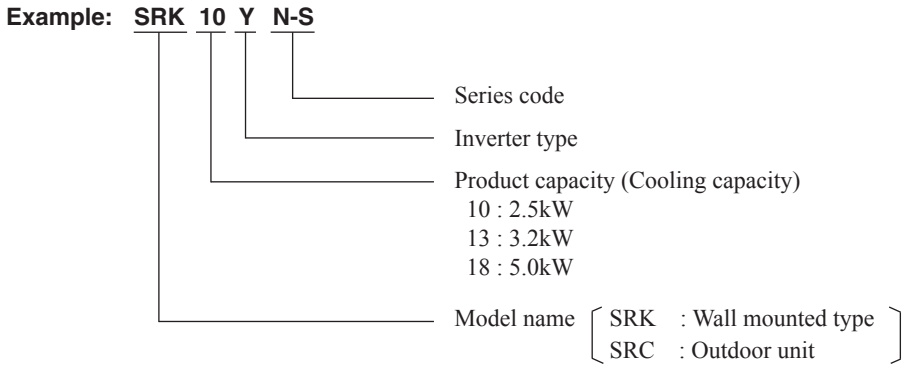
TECHNICAL MANUAL

CONTENTS

1. SPECIFICATIONS 4
2. EXTERIOR DIMENSIONS 7
(1) Indoor units 7
(2) Outdoor units 8
(3) Wireless remote control 10
3. ELECTRICAL WIRING 11
(1) Indoor units 11
(2) Outdoor units 12
4. PIPING SYSTEM 13
5. RANGE OF USAGE & LIMITATIONS 15
6. APPLICATION DATA 17
7. OUTLINE OF OPERATION CONTROL BY MICROCOMPUTER 24
(1) Operation control function by remote control 24
(2) Unit ON/OFF button 25
(3) Auto restart function 25
(4) Custom cord switching procedure 25
(5) High power operation 26
(6) Economy operation 26
(7) Flap control 27
(8) Timer operation 27
(9) Outline of cooling operation 28
(10) Outline of dry (dehumidifying) operation 28
(11) Outline of automatic operation 29
(12) Protection control function 30
8. MAINTENANCE DATA 35
(1) Cautions 35
(2) Items to check before troubleshooting 35
(3) Troubleshooting procedure (If the air conditioner does not run at all) 35
(4) Troubleshooting procedure (If the air conditioner runs) 36
(5) Self-diagnosis table 37
(6) Service mode (Trouble mode access function) 38
(7) Inspection procedures corresponding to detail of trouble 46

(8) Phenomenon observed after shortcircuit, wire breakage on sensor 50
(9) Checking the indoor electrical equipment 51
(10) How to make sure of wireless remote control 52
(11) Outdoor unit inspection points 53

■How to read the model name



1. SPECIFICATIONS

Model SRK10YN-S

Item				Model	SRK10YN-S	
					Indoor unit **SRK10YN-S**	Outdoor unit **SRC10YN-S**
Power source					1 Phase, 220 - 240V, 50Hz	
Operation data	Nominal cooling capacity (range)			kW	2.5 (1.0 (Min.) - 2.8 (Max.))	
	Nominal heating capacity (range)			kW	—	
	Power consumption		Cooling	kW	0.77 (0.25 - 1.010)	
			Heating		—	
	Max power consumption				1.31	
	Running current		Cooling	A	3.9 / 3.7 / 3.6 (220/ 230/ 240 V)	
			Heating		—	
	Inrush current, max current				3.9 / 3.7 / 3.6 (220/ 230/ 240 V) , 7.5	
	Power factor		Cooling	%	90	
			Heating		—	
	EER		Cooling		3.25	
	COP		Heating		—	
	Sound power level		Cooling	dB(A)	—	—
			Heating		—	—
	Sound pressure level		Cooling		Hi: 43 Me: 36 Lo: 24	47
			Heating		—	—
	Silent mode sound pressure level				—	—
Exterior dimensions (Height x Width x Depth)				mm	262 x 769 x 210	540 x 645(+57) x 275
Exterior appearance (Munsell color)					Fine snow (8.0Y 9.3/0.1) near equivalent	Stucco white (4.2Y 7.5/1.1) near equivalent
Net weight				kg	7	25
Compressor type & Q'ty					—	RM-B5077MDE5(Rotary type) x 1
Compressor motor (Starting method)				kW	—	0.75 (Inverter driven)
Refrigerant oil (Amount, type)				ℓ	—	0.3 (DIAMOND FREEZE MA68)
Refrigerant (Type, amount, pre-charge length)				kg	R410A 0.65 in outdoor unit (incl. the amount for the piping of 10m)	
Heat exchanger					Louver fins & inner grooved tubing	M fins & inner grooved tubing
Refrigerant control					Capillary tubes + Electronic expansion valve	
Fan type & Q'ty					Tangential fan x 1	Propeller fan x 1
Fan motor (Stating method)				W	30 (Direct drive)	24 (Direct drive)
Air flow			Cooling	m^3/min	Hi: 10.1 Me: 7.3 Lo: 4.2	26.0
			Heating		—	—
Available external static pressure				Pa	0	0
Outside air intake					Not possible	—
Air filter, Quality / Quantity					Polypropylene net (washable) x 1	—
Shock & vibration absorber					Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor & compressor)
Electric heater					—	—
Operation control	Remote control				Wireless remote control	
	Room temperature control				Microcomputer thermostat	
	Operation display				RUN: Green, TIMER: Yellow	
Safety equipments					Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Cooling overload protection	
Installation data	Refrigerant piping size (O.D)			mm	Liquid line : ϕ6.35 (1/4") Gas line : ϕ9.52 (3/8")	
	Connecting method				Flare connection	Flare connection
	Attached length of piping			m	Liquid line : 0.39 / Gas line : 0.32	—
	Insulation for piping				Necessary (Both sides), independent	
	Refrigerant line (one way) length			m	Max. 15	
	Vertical height diff. between O.U. and I.U.			m	Max. 10 (Outdoor unit is higher) / Max. 10 (Outdoor unit is lower)	
	Drain hose				Hose connectable (VP 16)	Holes ϕ20 x 2 pcs
Drain pump, max lift height				mm	—	—
Recommended breaker size				A	16	
L.R.A. (Locked rotor ampere)				A	3.9 / 3.7 / 3.6 (220/ 230/ 240 V)	
Interconnecting wires		Size x Core number			1.5mm^2 x 4 cores (Including earth cable) / Terminal block (Screw fixing type)	
IP number					IPX0	IPX4
Standard accessories					Mounting kit	
Option parts					—	

Note (1) The data are measured at the following conditions. The pipe length is 5m.

item / operation	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling	27˚C	19˚C	35˚C	24˚C	ISO5151-T1
Heating	20˚C	—	7˚C	6˚C	

(2) This air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
(4) Select the breaker size according to the own national standard.
(5) The refrigerant quantity to be charged includes the refrigerant in 10 m connecting piping. (purging is not required even for the short piping.)
If the piping length is longer, when it is 10 to 15 m, add 20 g refrigerant per meter.

RWA000Z259

Model SRK13YN-S

Item			Model	SRK13YN-S	
				Indoor unit **SRK13YN-S**	Outdoor unit **SRC13YN-S**
Power source				1 Phase, 220 - 240V, 50Hz	
Operation data	Nominal cooling capacity (range)		kW	3.2 (1.0 (Min.) - 3.5 (Max.))	
	Nominal heating capacity (range)		kW	—	
	Power consumption	Cooling	kW	1.00 (0.23 - 1.30)	
		Heating		—	
	Max power consumption			1.42	
	Running current	Cooling	A	4.9 / 4.7 / 4.5 (220/ 230/ 240 V)	
		Heating		—	
	Inrush current, max current			4.9 / 4.7 / 4.5 (220/ 230/ 240 V) ,7.5	
	Power factor	Cooling	%	93	
		Heating		—	
	EER	Cooling		3.20	
	COP	Heating		—	
	Sound power level	Cooling	dB(A)	—	—
		Heating		—	—
	Sound pressure level	Cooling		Hi: 44 Me: 37 Lo: 25	49
		Heating		—	—
	Silent mode sound pressure level			—	—
Exterior dimensions (Height x Width x Depth)			mm	262 x 769 x 210	540 x 645(+57) x 275
Exterior appearance (Munsell color)				Fine snow (8.0Y 9.3/0.1) near equivalent	Stucco white (4.2Y 7.5/1.1) near equivalent
Net weight			kg	7	27
Compressor type & Q'ty				—	RM-B5077MDE5(Rotary type) x 1
Compressor motor (Starting method)			kW	—	0.90 (Inverter driven)
Refrigerant oil (Amount, type)			ℓ	—	0.3 (DIAMOND FREEZE MA68)
Refrigerant (Type, amount, pre-charge length)			kg	R410A 0.75 in outdoor unit (incl. the amount for the piping of 15m)	
Heat exchanger				Louver fins & inner grooved tubing	M fins & inner grooved tubing
Refrigerant control				Capillary tubes + Electronic expansion valve	
Fan type & Q'ty				Tangential fan x 1	Propeller fan x 1
Fan motor (Stating method)			W	30 (Direct drive)	24 (Direct drive)
Air flow		Cooling	m^3/min	Hi: 9.5 Me: 6.8 Lo: 4.2	25.4
		Heating		—	—
Available external static pressure			Pa	0	0
Outside air intake				Not possible	—
Air filter, Quality / Quantity				Polypropylene net (washable) x 1	—
Shock & vibration absorber				Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor & compressor)
Electric heater				—	—
Operation control	Remote control			Wireless remote control	
	Room temperature control			Microcomputer thermostat	
	Operation display			RUN: Green, TIMER: Yellow	
Safety equipments				Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Cooling overload protectio	
Installation data	Refrigerant piping size (O.D)		mm	Liquid line : ϕ 6.35 (1/4")	Gas line : ϕ 9.52 (3/8")
	Connecting method			Flare connection	Flare connection
	Attached length of piping		m	Liquid line : 0.39 / Gas line : 0.32	—
	Insulation for piping			Necessary (Both sides), independent	
	Refrigerant line (one way) length		m	Max. 15	
	Vertical height diff. between O.U. and I.U.		m	Max. 10 (Outdoor unit is higher) / Max. 10 (Outdoor unit is lower)	
	Drain hose			Hose connectable (VP 16)	Holes ϕ 20 x 2 pcs
Drain pump, max lift height			mm	—	—
Recommended breaker size			A	16	
L.R.A. (Locked rotor ampere)			A	4.9 / 4.7 / 4.5 (220/ 230/ 240 V)	
Interconnecting wires	Size x Core number			1.5mm^2 x 4 cores (Including earth cable) / Terminal block (Screw fixing type)	
IP number				IPX0	IPX4
Standard accessories				Mounting kit	
Option parts				—	

Note (1) The data are measured at the following conditions. The pipe length is 5m.

item / operation	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling	27˚C	19˚C	35˚C	24˚C	ISO5151-T1
Heating	20˚C	—	7˚C	6˚C	

(2) This air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
(4) Select the breaker size according to the own national standard.
(5) The refrigerant quantity to be charged includes the refrigerant in 15 m connecting piping. (purging is not required even for the short piping.)

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Model SRK18YN-S

Item			Model	SRK18YN-S	
				Indoor unit **SRK18YN-S**	Outdoor unit **SRC18YN-S**
Power source				1 Phase, 220 - 240V, 50Hz	
Operation data	Nominal cooling capacity (range)		kW	5.0 (0.9 (Min.) - 5.1 (Max.))	
	Nominal heating capacity (range)		kW	—	
	Power consumption	Cooling	kW	1.64 (0.22 - 1.96)	
		Heating		—	
	Max power consumption			2.00	
	Running current	Cooling	A	7.8 / 7.4 / 7.1 (220/ 230/ 240 V)	
		Heating		—	
	Inrush current, max current			7.8 / 7.4 / 7.1 (220/ 230/ 240 V) , 12.5	
	Power factor	Cooling	%	96	
		Heating		—	
	EER	Cooling		3.05	
	COP	Heating		—	
	Sound power level	Cooling	dB(A)	—	—
		Heating		—	—
	Sound pressure level	Cooling		Hi: 49 Me: 39 Lo: 25	55
		Heating		—	—
	Silent mode sound pressure level			—	—
Exterior dimensions (Height x Width x Depth)			mm	262 x 769 x 210	595 x 780(+62) x 290
Exterior appearance (Munsell color)				Fine snow (8.0Y 9.3/0.1) near equivalent	Stucco white (4.2Y 7.5/1.1) near equivalent
Net weight			kg	7.5	39.5
Compressor type & Q'ty				—	GKT128MFA (Twin Potary type) x 1
Compressor motor (Starting method)			kW	—	1.10 (Inverter driven)
Refrigerant oil (Amount, type)			ℓ	—	0.45 (FVC68D)
Refrigerant (Type, amount, pre-charge length)			kg	R410A 1.20 in outdoor unit (incl. the amount for the piping of 15m)	
Heat exchanger				Louver fins & inner grooved tubing	Louver fins & inner grooved tubing
Refrigerant control				Capillary tubes + Electronic expansion valve	
Fan type & Q'ty				Tangential fan x 1	Propeller fan x 1
Fan motor (Stating method)			W	30 (Direct drive)	24 (Direct drive)
Air flow		Cooling	m^3/min	Hi: 10.1 Me: 7.2 Lo: 3.8	35
		Heating		—	—
Available external static pressure			Pa	0	0
Outside air intake				Not possible	—
Air filter, Quality / Quantity				Polypropylene net (washable) x 1	—
Shock & vibration absorber				Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor & compressor)
Electric heater				—	—
Operation control	Remote control			Wireless remote control	
	Room temperature control			Microcomputer thermostat	
	Operation display			RUN: Green, TIMER: Yellow	
Safety equipments				Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Cooling overload protection	
Installation data	Refrigerant piping size (O.D)		mm	Liquid line : ϕ6.35 (1/4") Gas line : ϕ12.7 (1/2")	
	Connecting method			Flare connection	Flare connection
	Attached length of piping		m	Liquid line : 0.39 / Gas line : 0.32	—
	Insulation for piping			Necessary (Both sides), independent	
	Refrigerant line (one way) length		m	Max. 25	
	Vertical height diff. between O.U. and I.U.		m	Max. 15 (Outdoor unit is higher) / Max. 15 (Outdoor unit is lower)	
	Drain hose			Hose connectable (VP 16)	Holes ϕ20 x 2 pcs
Drain pump, max lift height			mm	—	—
Recommended breaker size			A	16	
L.R.A. (Locked rotor ampere)			A	7.8 / 7.4 / 7.1 (220/ 230/ 240 V)	
Interconnecting wires		Size x Core number		1.5mm^2 x 4 cores (Including earth cable) / Terminal block (Screw fixing type)	
IP number				IPX0	IPX4
Standard accessories				Mounting kit	
Option parts				—	

Note (1) The data are measured at the following conditions.

The pipe length is 5m.

item / operation	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling	27˚C	19˚C	35˚C	24˚C	ISO5151-T1
Heating	20˚C	—	7˚C	6˚C	

(2) This air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
(4) Select the breaker size according to the own national standard.
(5) The refrigerant quantity to be charged includes the refrigerant in 15 m connecting piping. (purging is not required even for the short piping.)
If the piping length is longer, when it is 15 to 25 m, add 20 g refrigerant per meter.

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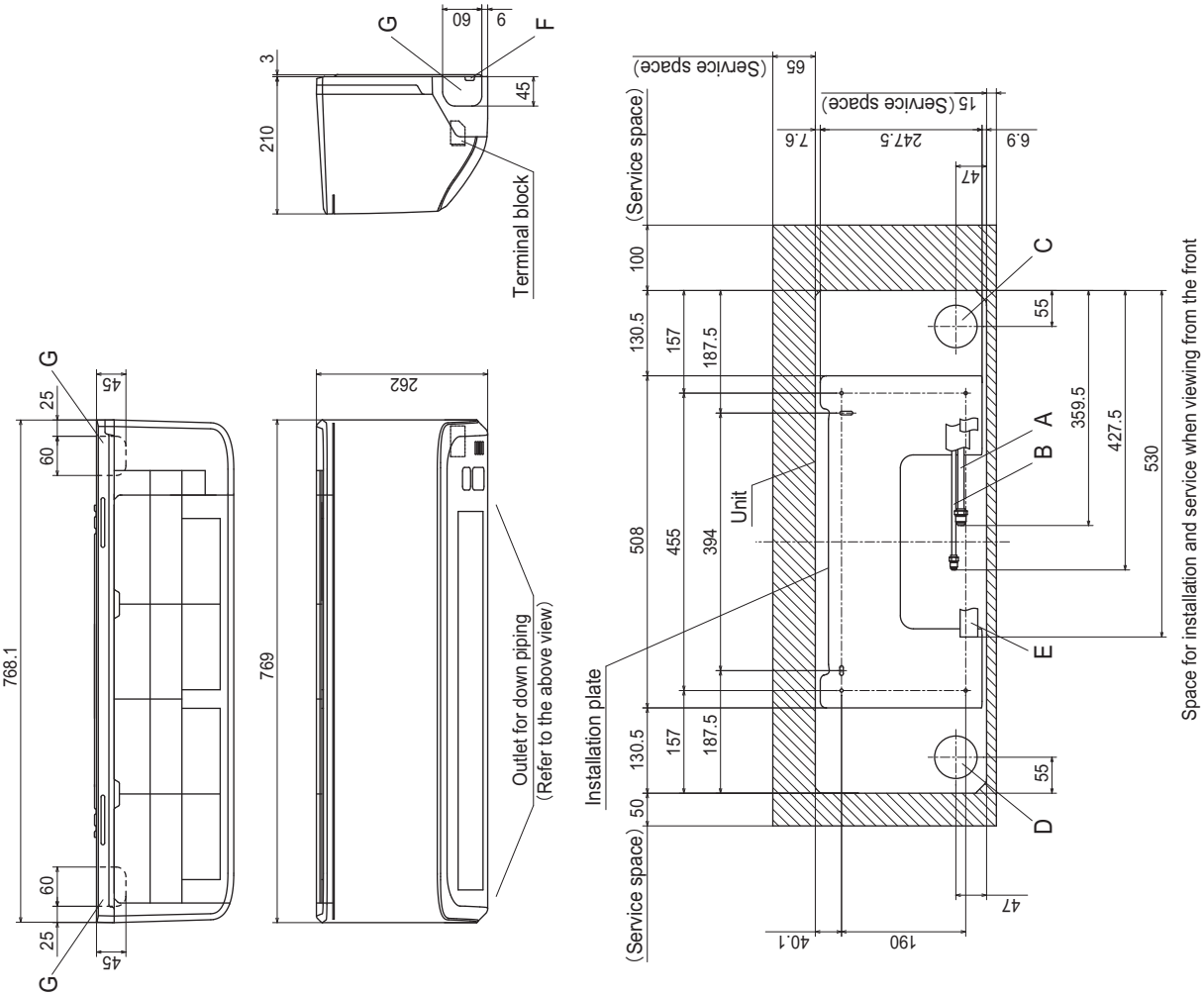
2. EXTERIOR DIMENSIONS

(1) Indoor units

Models SRK10YN-S, 13YN-S, 18YN-S

Symbol	Content	
A	Gas piping	Model 10,13 φ9.52 (3/8") (Flare)
		Model 18 φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)
C	Hole on wall for right rear piping	(φ65)
D	Hole on wall for left rear piping	(φ65)
E	Drain hose	VP16
F	Outlet for wiring	
G	Outlet for piping (on both side)	



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(2) Outdoor units

Models SRC10YN-S, 13YN-S

Unit:mm

Notes
(1) It must not be surrounded by walls on the four sides.
(2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
(3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
(4) Leave 1m or more space above the unit.
(5) A wall in front of the blower outlet must not exceed the units height.
(6) The model name label is attached on the right side of the unit.

Symbol	Content	
A	Service valve connection (gas side)	ϕ9.52 (3/8") (Flare)
B	Service valve connection (liquid side)	ϕ6.35 (1/4") (Flare)
C	Pipe/cable draw-out hole	
D	Drain discharge hole	ϕ20×2places
E	Anchor bolt hole	M10×4places

Minimum installation space

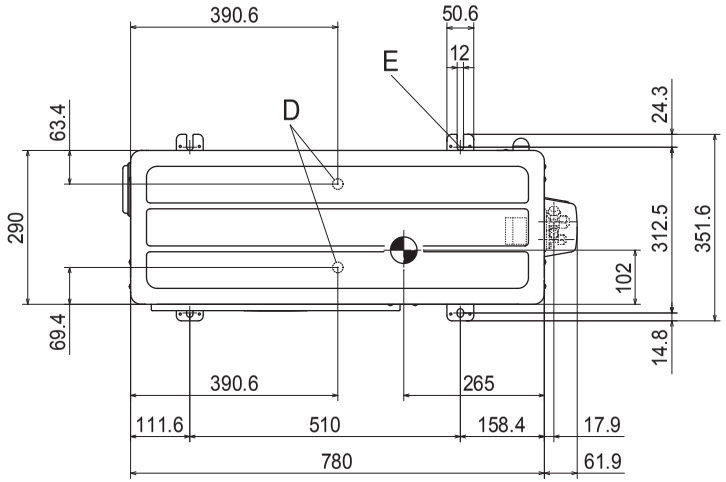
Examples of installation / Dimensions	Ⅰ	Ⅱ	Ⅲ	Ⅳ
L1	Open	280	280	180
L2	100	100	Open	Open
L3	100	80	80	80
L4	250	Open	250	Open

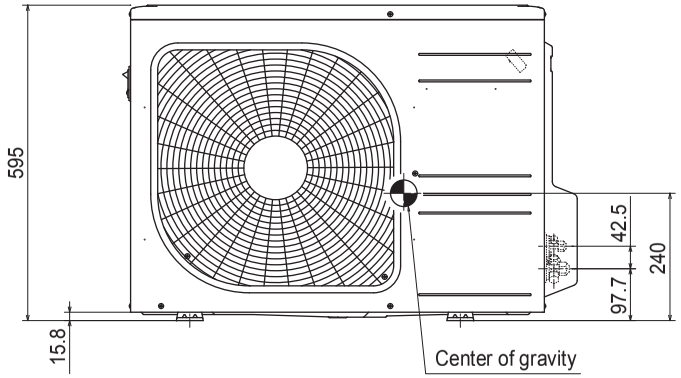
Dimensions / MODEL	※1	※2	※3
SRC10	210	240	103
SRC13	220	240	108

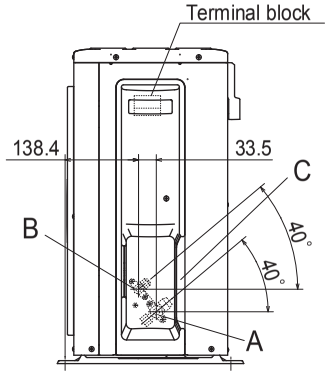
RCW000Z002

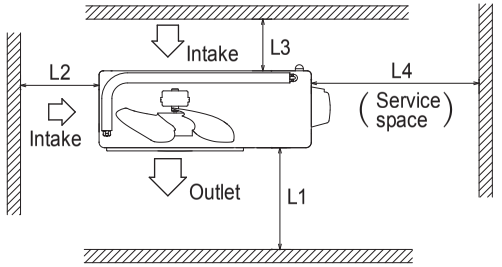
Symbol	Content	
A	Service valve connection (gas side)	ϕ12.7 (1／2") (Flare)
B	Service valve connection (liquid side)	ϕ6.35 (1／4") (Flare)
C	Pipe／cable draw-out hole	
D	Drain discharge hole	ϕ20 × 2places
E	Anchor bolt hole	M10 × 4places

Notes
(1) It must not be surrounded by walls on the four sides.
(2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
(3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
(4) Leave 1m or more space above the unit.
(5) A wall in front of the blower outlet must not exceed the units height.
(6) The model name label is attached on the lower right corner of the front panel.









Minimum installation space

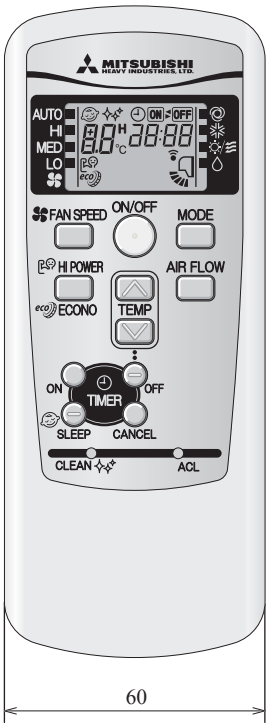
Examples of installation / Dimensions	I	II	III	IV
L1	Open	280	280	180
L2	100	100	Open	Open
L3	100	80	80	80
L4	250	Open	250	Open

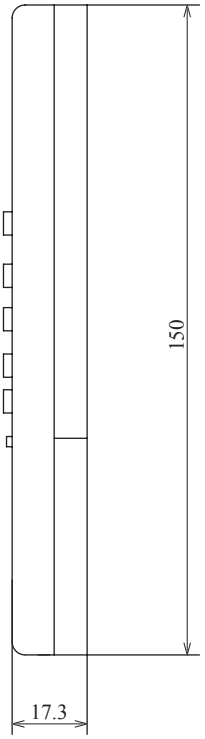
Unit:mm

RCV000Z016

(3) Wireless remote control

Unit: mm





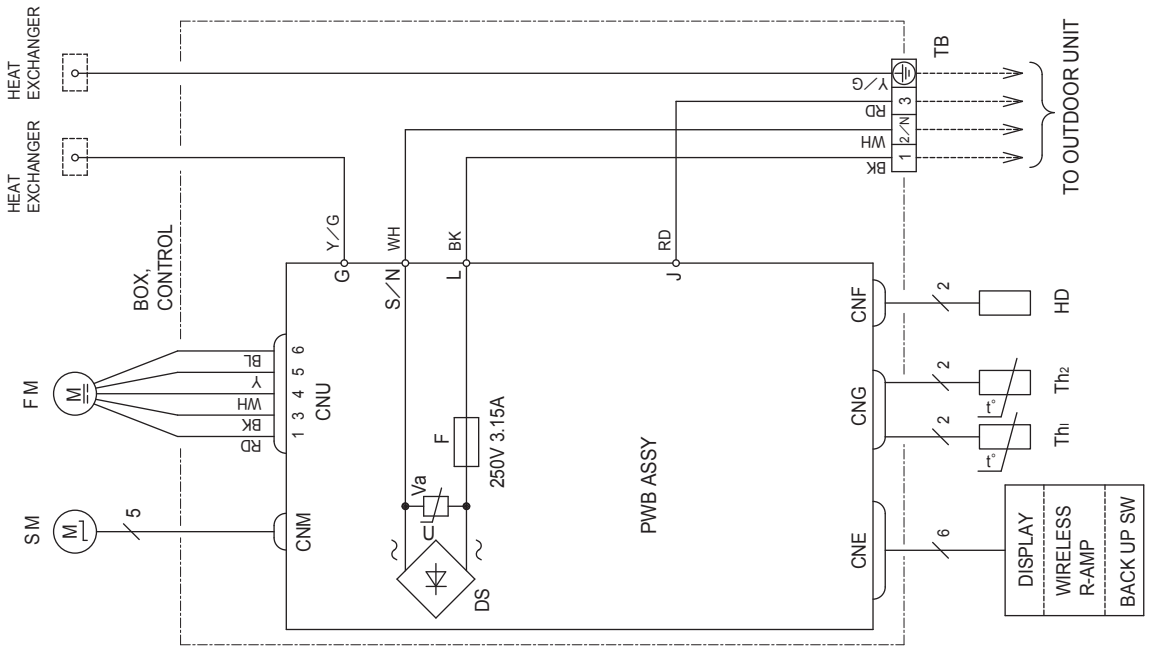
3. ELECTRICAL WIRING

(1) Indoor units

Models SRK10YN-S, 13YN-S, 18YN-S

Item	Description
CNE	Connector
CNF	
CNG	
CNM	
CNU	
FM	Fan motor
SM	Flap motor
HD	Humidity sensor
Th_1	Room temp. sensor
Th_2	Heat exch. sensor
DS	Diode stack
F	Fuse
TB	Terminal block
Va	Varistor

Mark	Color
BK	Black
BL	Blue
RD	Red
WH	White
Y	Yellow
Y／G	Yellow／Green



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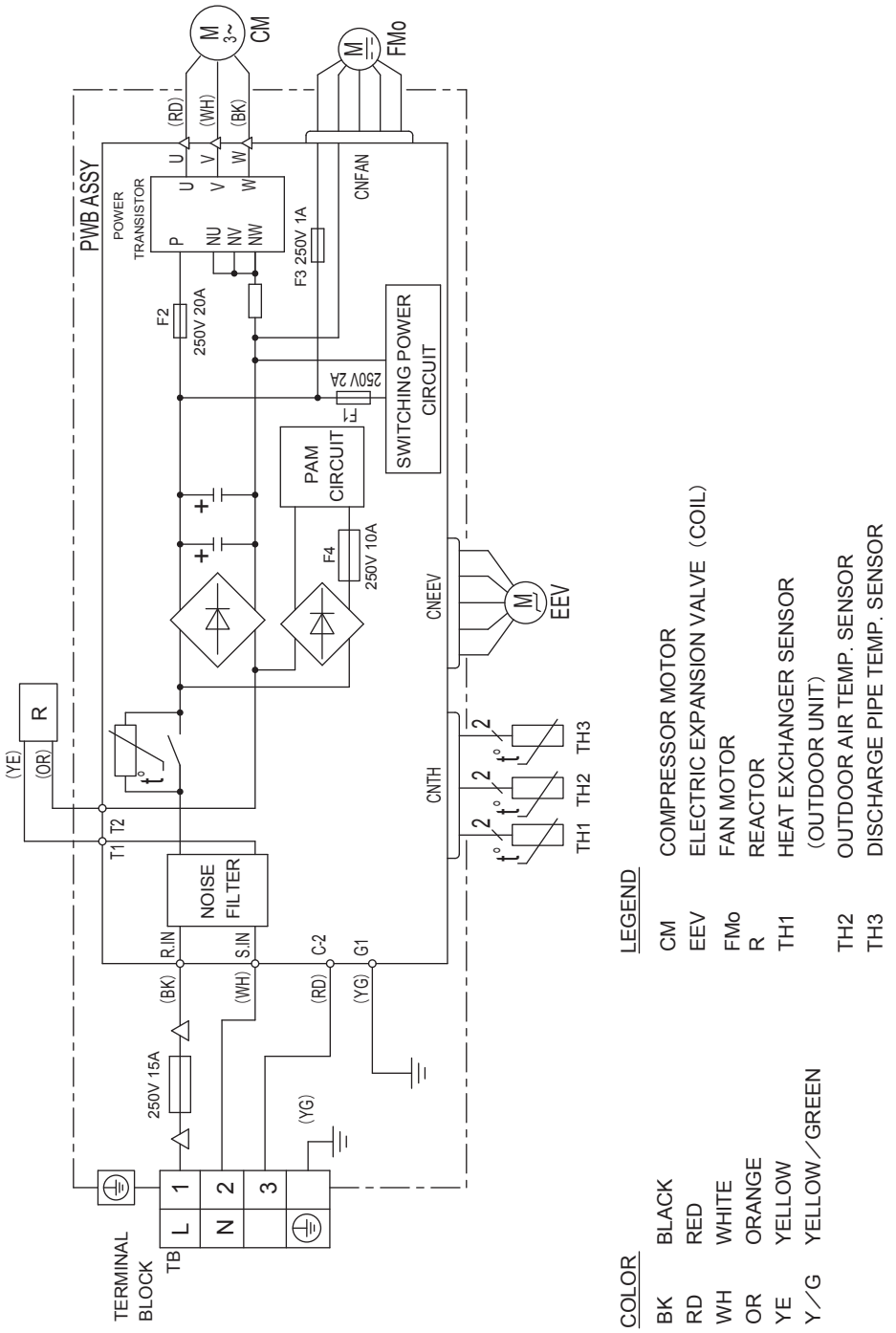
(2) Outdoor units

Models SRC10YN-S, 13YN-S, 18YN-S



LEGEND

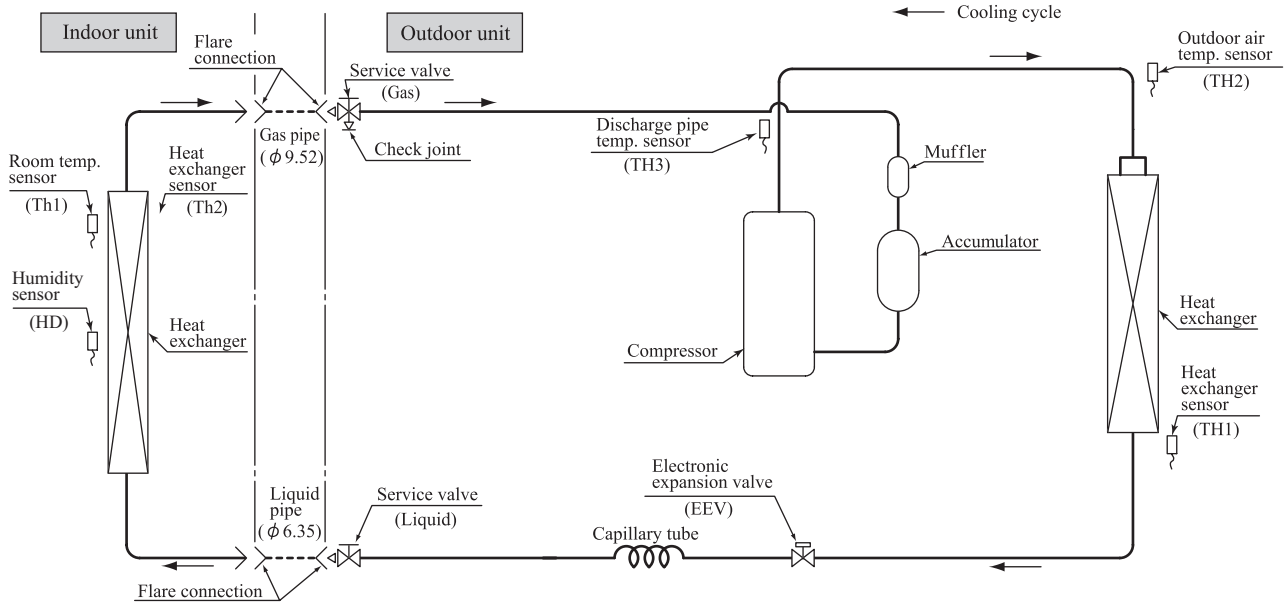
CM	COMPRESSOR MOTOR
EEV	ELECTRIC EXPANSION VALVE (COIL)
FMo	FAN MOTOR
R	REACTOR
TH1	HEAT EXCHANGER SENSOR (OUTDOOR UNIT)
TH2	OUTDOOR AIR TEMP. SENSOR
TH3	DISCHARGE PIPE TEMP. SENSOR

COLOR

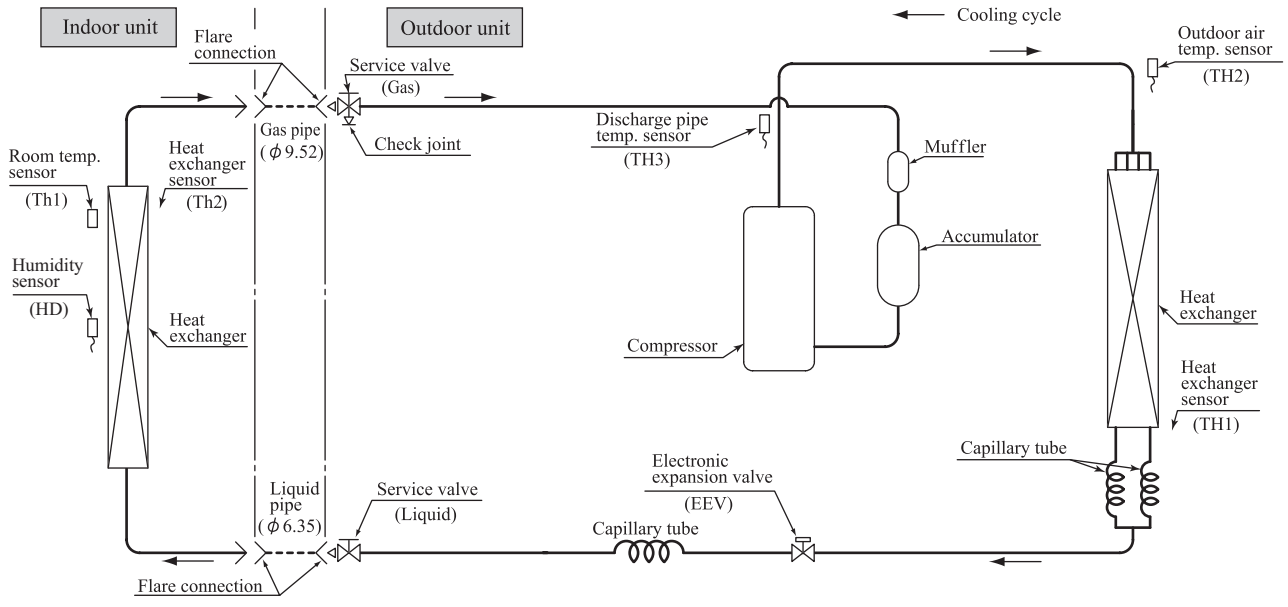
BK	BLACK
RD	RED
WH	WHITE
OR	ORANGE
YE	YELLOW
Y／G	YELLOW／GREEN

4. PIPING SYSTEM

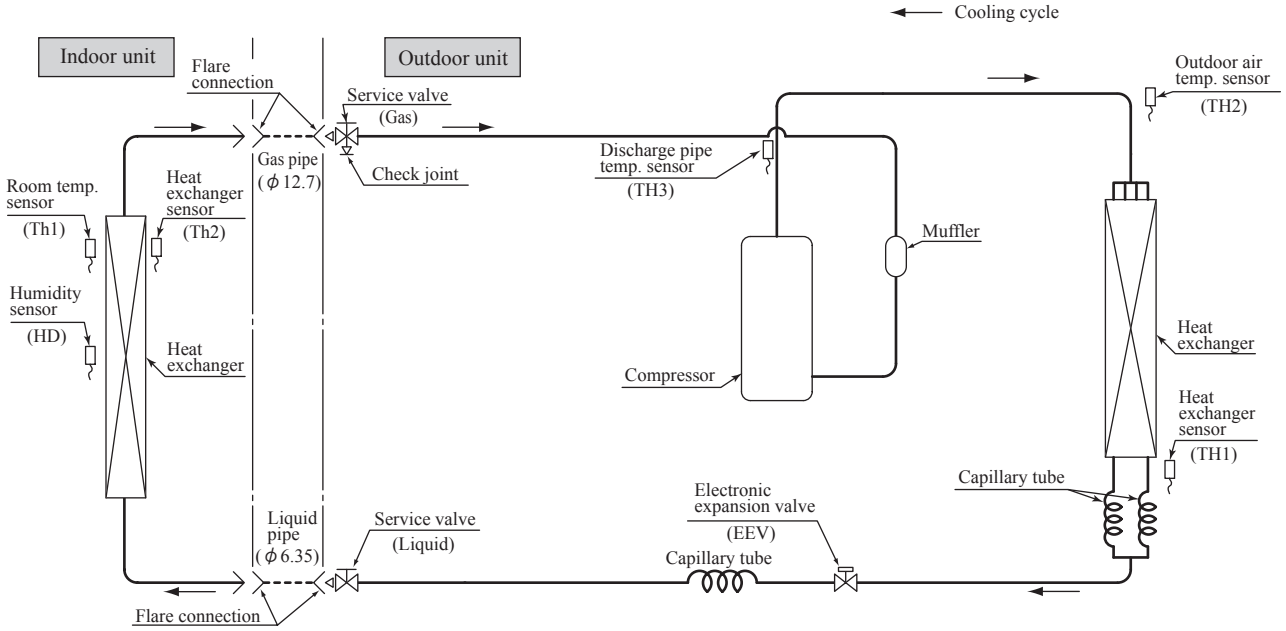
Model SRK10YN-S



Model SRK13YN-S



Model SRK18YN-S



5. RANGE OF USAGE & LIMITATIONS

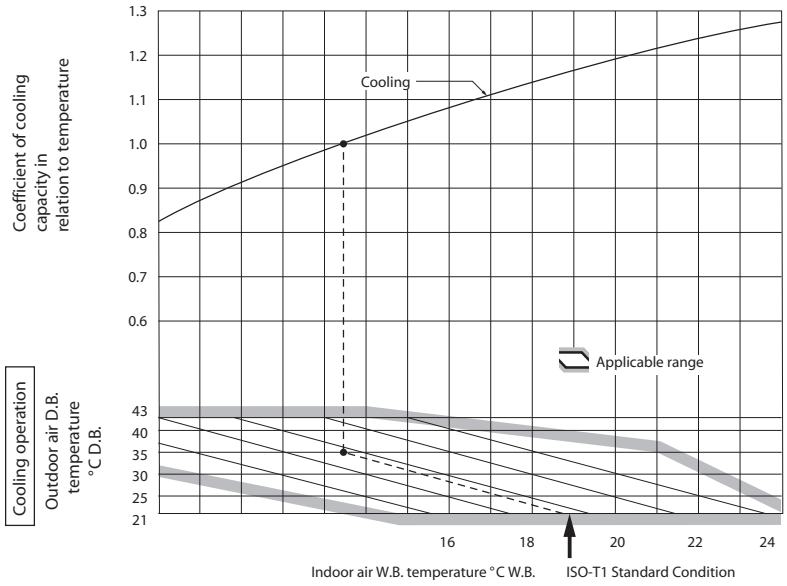
Item \ Models	SRK10, 13YN-S	SRK18YN-S
Indoor return air temperature (Upper, lower limits)	Cooling operation : Approximately 21 to 32℃ D.B. (Refer to the selection chart)	
Outdoor air temperature (Upper, lower limits)	Cooling operation : Approximately 21 to 43℃ D.B. (Refer to the selection chart)	
Refrigerant line (one way) length	Max. 15m	Max. 25m
Vertical height difference between outdoor unit and indoor unit	Max. 10m (Outdoor unit is higher) Max. 10m (Outdoor unit is lower)	Max. 15m (Outdoor unit is higher) Max. 15m (Outdoor unit is lower)
Power source voltage	Rating ±10%	
Voltage at starting	Min. 85% of rating	
Frequency of ON−OFF cycle	Max. 4 times/h (Inching prevention 10 minutes)	Max. 7 times/h (Inching prevention 5 minutes)
ON and OFF interval	Min. 3 minutes	

Selection chart

Correct the cooling capacity in accordance with the conditions as follows. The net cooling capacity can be obtained in the following way.

Net capacity = Capacity shown on specification × Correction factors as follows.

(1) Coefficient of cooling capacity in relation to temperatures



(2) Correction of cooling capacity in relation to one way length of refrigerant piping

It is necessary to correct the cooling capacity in relation to the one way piping length between the indoor and outdoor units.

Piping length [m]	7	10	15	20	25	30
Cooling	1.0	0.99	0.975	0.965	0.95	0.935

How to obtain the cooling capacity

Example : The net cooling capacity of the model SRK13YN-S with the piping length of 15m, indoor wet-bulb temperature at 19.0˚C and outdoor dry-bulb temperature 35˚C is Net cooling capacity = $\underset{\text{SRK13YN-S}}{3200} \times \underset{\text{Length 15m}}{0.975} \times \underset{\text{Factor by air temperatures}}{1.0} = 3120\ \text{W}$

6. APPLICATION DATA

WALL TYPE AIR CONDITIONER
R410A REFRIGERANT USED

When install the unit, be sure to check whether the selection of installation place, power supply specifications, usage limitation (piping length, height differences between indoor and outdoor units, power supply voltage and etc.) and installation spaces.

Safety precautions

- Read the “Safety precautions” carefully first of all and strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, **⚠ WARNING** and **⚠ CAUTION**.
  ⚠ WARNING : Wrong installation would cause serious consequences such as injuries or death.
  ⚠ CAUTION : Wrong installation might cause serious consequences depending on circumstances.
  Both mentions the important items to protect your health and safety so strictly follow them by any means.
- Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the user’s manual.
- Keep the installation manual together with user’s manual at a place where any user can read at any time. Moreover if necessary, ask to hand them to a new user.
- For installing qualified personnel, take precautions in respect to themselves by using suitable protective clothing, groves, etc., and then perform the installation works.
- Please pay attention not to fall down the tools, etc. when installing the unit at the high position.
- If unusual noise can be heard during operation, consult the dealer.
- The meanings of “Marks” used here are shown as follows:

	Never do it under any circumstances.		**Always do it according to the instruction.**

⚠ WARNING

- **Installation must be carried out by the qualified installer.**
  If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction. Do not carry out the installation and maintenance work except the by qualified installer.
- **Install the system in full accordance with the installation manual.**
  Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire.
- **Be sure to use only for household and residence.**
  If this appliance is installed in inferior environment such as machine shop and etc., it can cause malfunction.
- **Use the original accessories and the specified components for installation.**
  If parts other than those prescribed by us are used, it may cause water leaks, electric shocks, fire and personal injury.
- **Install the unit in a location with good support.**
  Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.
- **Ensure the unit is stable when installed, so that it can withstand earthquakes and strong winds.**
  Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.
- **Ventilate the working area well in the event of refrigerant leakage during installation.**
  If the density of refrigerant exceeds the limit, please consult the dealer and install the ventilation system, otherwise lack of oxygen can occur, which can cause serious accident.
- **When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage, referred by the formula (accordance with ISO5149).**
  If the density of refrigerant exceeds the limit, please consult the dealer and install the ventilation system, otherwise lack of oxygen can occur, which can cause serious accident.
- **After completed installation, check that no refrigerant leaks from the system.**
  If refrigerant leaks into the room and comes into contact with an oven or other hot surface, poisonous gas is produced.
- **Use the prescribed pipes, flare nuts and tools for R410A.**
  Using existing parts (for R22 or R407C) can cause the unit failure and serious accidents due to burst of the refrigerant circuit.
- **Tighten the flare nut by torque wrench with specified method.**
  If the flare nut were tightened with excess torque, this may cause burst and refrigerant leakage after a long period.
- **Do not open the operation valves for liquid line and gas line until completed refrigerant piping work, air tightness test and evacuation.**
  If the compressor is operated in state of opening operation valves before completed connection of refrigerant piping work, air can be sucked into refrigerant circuit, which can cause burst or personal injury due to anomalously high pressure in the refrigerant.
- **The electrical installation must be carried out by the qualified electrician in accordance with “the norm for electrical work” and “national wiring regulation”, and the system must be connected to the dedicated circuit.**
  Power supply with insufficient capacity and incorrect function done by improper work can cause electric shocks and fire.
- **Be sure to shut off the power before starting electrical work.**
  Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment.
- **Be sure to use the cables conformed to safety standard and cable ampacity for power distribution work.**
  Unconformable cables can cause electric leak, anomalous heat production or fire.
- **This appliance must be connected to main power supply by means of a circuit breaker or switch (fuse:16A) with a contact separation of at least 3mm.**
- **When plugging this appliance, a plug conforming to the norm IEC60884-1 must be used.**
- **Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent overloading the terminal blocks.**
  Loose connections or cable mountings can cause anomalous heat production or fire.
- **Arrange the wiring in the control box so that it cannot be pushed up further into the box. Install the service panel correctly.**
  Incorrect installation may result in overheating and fire.
- **Be sure to fix up the service panels.**
  Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water.
- **Be sure to switch off the power supply in the event of installation, inspection or servicing.**
  If the power supply is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan.
- **Stop the compressor before removing the pipe after shutting the service valve on pump down work.**
  If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.
- **Only use prescribed option parts. The installation must be carried out by the qualified installer.**
  If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- **Be sure to wear protective goggles and gloves while at work.**
- **Earth leakage breaker must be installed.**
  If the earth leakage breaker is not installed, it can cause electric shocks.

- **Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulphide gas can occur.**
  Poisonous gases will flow into the room through drainage pipe and seriously affect the user’s health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
- **Ensure that no air enters in the refrigerant circuit when the unit is installed and removed.**
  If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury.
- **Do not bundling, winding or processing for the power cord. Or, do not deforming the power plug due to tread it.**
  This may cause fire or heating.
- **Do not processing, splice the power cord, or share a socket with other power plugs.**
  This may cause fire or electric shock due to defecting contact, defecting insulation and over-current etc.
- **Do not vent R410A into the atmosphere : R410A is a fluorinated greenhouse gas, covered by the Kyoto Protocol with Global Warming Potential (GWP)=1975.**
- **Do not run the unit with removed panels or protections.**
  Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shocks.
- **Do not perform any change of protective device itself or its setup condition.**
  The forced operation by short-circuiting protective device of pressure switch and temperature controller or the use of non specified component can cause fire or burst.

▮ Safety precautions

⚠ CAUTION

- **Carry out the electrical work for ground lead with care.**
  Do not connect the ground lead to the gas line, water line, lightning conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-circuiting.

- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.**
  Using the incorrect one could cause the system failure and fire.
- **Install isolator or disconnect switch on the power supply wiring in accordance with the local codes and regulations.**
  The isolator should be locked in OFF state in accordance with EN60204-1.
- **Be sure to install indoor unit properly according to the instruction manual in order to run off the drainage smoothly.**
  Improper installation of indoor unit can cause dropping water into the room and damaging personal property.
- **Install the drainage pipe to run off drainage securely according to the installation manual.**
  Incorrect installation of the drainage pipe can cause dropping water into the room and damaging personal property.
- **Be sure to install the drainage pipe with descending slope of 1/100 or more, and not to make traps and air-bleedings.**
  Check if the drainage runs off securely during commissioning and ensure the space for inspection and maintenance.
- **After maintenance, all wiring, wiring ties and the like, should be returned to their original state and wiring route, and the necessary clearance from all metal parts should be secured.**
- **Secure a space for installation, inspection and maintenance specified in the manual.**
  Insufficient space can result in accident such as personal injury due to falling from the installation place.
- **Take care when carrying the unit by hand.**
  If the unit weights more than 20kg, it must be carried by two or more persons. Do not carry by the plastic straps, always use the carry handle when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins.
- **Dispose of any packing materials correctly.**
  Any remaining packing materials can cause personal injury as it contains nails and wood. And to avoid danger of suffocation, be sure to keep the plastic wrapper away from children and to dispose after tear it up.
- **For installation work, be careful not to get injured with the heat exchanger, piping flare portion or screws etc.**
- **Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them.**
  Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables.
- **When perform the air conditioner operation (cooling or drying operation) in which ventilator is installed in the room. In this case, using the air conditioner in parallel with the ventilator, there is the possibility that drain water may backflow in accordance with the room lapse into the negative pressure status. Therefore, set up the opening port such as incorporate the air into the room that may appropriate to ventilation (For example; Open the door a little). In addition, just as above, so set up the opening port if the room lapse into negative pressure status due to register of the wind for the high rise apartment etc.**
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
  If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.

- **Do not install the unit in the locations listed below.**
  - Locations where carbon fiber, metal powder or any powder is floating.
  - Locations where any substances that can affect the unit such as sulphide gas, chloride gas, acid and alkaline can occur.
  - Vehicles and ships.
  - Locations where cosmetic or special sprays are often used.
  - Locations with direct exposure of oil mist and steam such as kitchen and machine plant.
  - Locations where any machines which generate high frequency harmonics are used.
  - Locations with salty atmospheres such as coastlines.
  - Locations with heavy snow (If installed, be sure to provide base flame and snow hood mentioned in the manual).
  - Locations where the unit is exposed to chimney smoke.
  - Locations at high altitude (more than 1000m high).
  - Locations with ammonic atmospheres.
  - Locations where heat radiation from other heat source can affect the unit.
  - Locations without good air circulation.
  - Locations with any obstacles which can prevent inlet and outlet air of the unit.
  - Locations where short circuit of air can occur (in case of multiple units installation).
  - Locations where strong air blows against the air outlet of outdoor unit.
  - Locations where something located above the unit could fall.

  It can cause remarkable decrease in performance, corrosion and damage of components, malfunction and fire.
- **Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation).**
  - Locations with any obstacles which can prevent inlet and outlet air of the unit.
  - Locations where vibration can be amplified due to insufficient strength of structure.
  - Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam (in case of the infrared specification unit).
  - Locations where an equipment affected by high harmonics is placed (TV set or radio receiver is placed within 1m).
  - Locations where drainage cannot run off safely.

  It can affect performance or function and etc.
- **Do not install the outdoor unit in the locations listed below.**
  - Locations where discharged hot air or operating sound of the outdoor unit can bother neighborhood.
  - Locations where outlet air of the outdoor unit blows directly to plants. The outlet air can affect adversely to the plant etc.
  - Locations where vibration can be amplified and transmitted due to insufficient strength of structure.
  - Locations where vibration and operation sound generated by the outdoor unit can affect seriously (on the wall or at the place near bed room).
  - Locations where an equipment affected by high harmonics is placed (TV set or radio receiver is placed within 1m).
  - Locations where drainage cannot run off safely.

  It can affect surrounding environment and cause a claim.
- **Do not install the unit where corrosive gas (such as sulfurous acid gas etc.) or combustible gas (such as thinner and petroleum gases) can accumulate or collect, or where volatile combustible substances are handled.**
  Corrosive gas can cause corrosion of heat exchanger, breakage of plastic parts and etc. And combustible gas can cause fire.
- **Do not install the unit near the location where leakage of combustible gases can occur.**
  If leaked gases accumulate around the unit, it can cause fire.
- **Do not use the indoor unit at the place where water splashes may occur such as in laundries.**
  Since the indoor unit is not waterproof, it can cause electric shocks and fire.
- **Do not install nor use the system close to the equipment that generates electromagnetic fields or high frequency harmonics.**
  Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.
- **Do not place any variables which will be damaged by getting wet under the indoor unit.**
  When the relative humidity is higher than 80% or drainage pipe is clogged, condensation or drainage water can drop and it can cause the damage of valuables.
- **Do not install the remote control at the direct sunlight.**
  It can cause malfunction or deformation of the remote control.
- **Do not use the unit for special purposes such as storing foods, cooling precision instruments and preservation of animals, plants or art.**
  It can cause the damage of the items.
- **Do not install the outdoor unit in a location where insects and small animals can inhabit.**
  Insects and small animals can enter the electric parts and cause damage or fire. Instruct the user to keep the surroundings clean.
- **Do not use the base flame for outdoor unit which is corroded or damaged due to long periods of operation.**
  Using an old and damage base flame can cause the unit falling down and cause personal injury.
- **Do not use any materials other than a fuse with the correct rating in the location where fuses are to be used.**
  Connecting the circuit with copper wire or other metal thread can cause unit failure and fire.
- **Do not touch any buttons with wet hands.**
  It can cause electric shocks.
- **Do not touch any refrigerant pipes with your hands when the system is in operation.**
  During operation the refrigerant pipes become extremely hot or extremely cold depending the operating condition, and it can cause burn injury or frost injury.
- **Do not touch the suction or aluminum fin on the outdoor unit.**
  This may cause injury.
- **Do not put anything on the outdoor unit and operating unit.**
  This may cause damage the objects or injury due to falling to the object.
- **Do not use the unit for special purposes such as storing foods, cooling precision instruments and preservation of animals, plants or art.**
- **Do not clean up the unit with water.**

Check before installation work

- Model name and power source
- Refrigerant piping length
- Piping, wiring and miscellaneous small parts

■ Standard accessories (installation kit) Page 22
■ Necessary tools for the installation work Page 23
■ Option parts Page 23

Selection of installation location

(Install at location that meets the following conditions, after getting approval from the customer)

Indoor unit

- ○ Where there is no obstructions to the air flow and where the cooled air can be evenly distributed.
- ○ A solid place where the unit or the wall will not vibrate.
- ○ A place where there will be enough space for servicing. (Where space mentioned right can be secured)
- ○ Where wiring and the piping work will be easy to conduct.
- ○ The place where receiving part is not exposed to the direct rays of the sun or the strong rays of the street lighting.
- ○ A place where it can be easily drained.
- ○ A place separated at least 1m away from the TV or the radio. (To prevent interference to images and sounds.)
- ○ Places where this unit is not affected by the high frequency equipment or electric equipment.
- ○ Avoid installing this unit in place where there is much oil mist.
- ○ Places where there is no electric equipment or household under the installing unit.

Wireless remote control

- ○ A place where the air conditioner can be received the signal surely during operating the wireless remote control.
- ○ Places where there is no affected by the TV and radio etc.
- ○ Do not place where exposed to direct sunlight or near heat devices such as a stove.

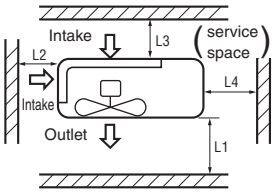
Limitation of the piping length

Model	SRK10, 13	SRK18
Total one way length	MAX. 15m	MAX. 25m
Vertical height difference	MAX. 10m	MAX. 15m

Additional refrigerant

SRK10	Less than 10m : Not required More than 10m : 20g/m
SRK13	Not required
SRK18	Less than 15m : Not required More than 15m : 20g/m

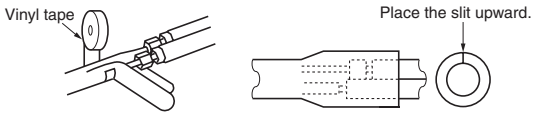
The height of a wall is 1200mm or less.



(mm)		Example installation			
		I	II	III	IV
Size	L1	Open	280	280	180
	L2	100	100	Open	Open
	L3	100	80	80	80
	L4	250	Open	250	Open

Insulation of the connection portion

Cover the coupling with insulator and then cover it with tape.



Earthing work

- ○ Earth work shall be carried out without fail in order to prevent electric shock and noise generation.
- ○ The connection of the earth cable to the following substances causes dangerous failures, therefore it shall never be done. City water pipe, Town gas pipe, TV antenna, lightning conductor, telephone line, etc.

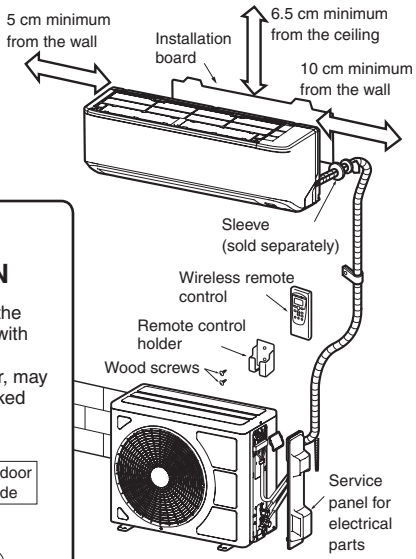
HOW to relocate or dispose of the unit

Page 23

Outdoor unit

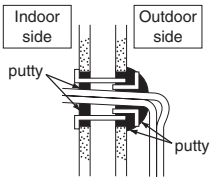
- ○ Where air is not trapped.
- ○ Where the installation fittings can be firmly installed.
- ○ Where wind does not hinder the intake and outlet pipes.
- ○ Out of the heat range of other heat sources.
- ○ A place where stringent regulation of electric noises is applicable.
- ○ Where it is safe for the drain water to be discharged.
- ○ Where noise and hot air will not bother neighboring residents.
- ○ Where snow will not accumulate.
- ○ Where strong winds will not blow against the outlet pipe.
- ○ When the unit is installed, the space of the following dimension and above shall be secured.

(In case the barrier is 1.2m or above in height, or is overhead, the sufficient space between the unit and wall shall be secured.)


5 cm minimum from the wall
Installation board
6.5 cm minimum from the ceiling
10 cm minimum from the wall
Sleeve (sold separately)
Wireless remote control
Remote control holder
Wood screws
Service panel for electrical parts

CAUTION

- Completely seal the hole on the wall with putty. Otherwise, furniture, or other, may be wetted by leaked water or dewing.

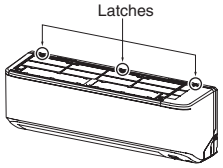


Relation between setting plate and indoor unit

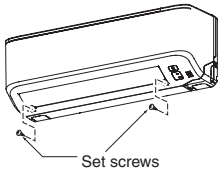
Page 23

How to remove and install the front panel

○ Removing
① Remove the 2 set screws.
② Remove the 3 latches in the upper section. And take off the front panel.



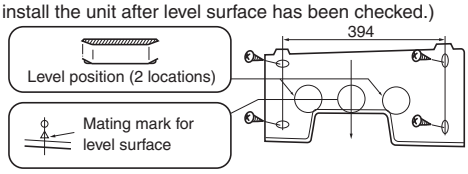
○ Installing
① Cover the body with the front panel. And lock the latches (on the base).
② Tighten the 2 set screws.
③ Carry out in the above order.



Installation of indoor unit

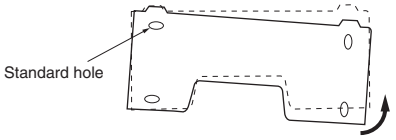
Installation of Installation board

Look for the inside wall structures (Intermediate support or pillar and firmly install the unit after level surface has been checked.)



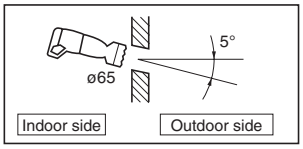
Installation space (indoor unit) Page 23

○ Adjustment of the installation board in the horizontal direction is to be conducted with four screws in a temporary tightened state.
○ Adjust so the board will be level by turning the board with the standard hole as the center.

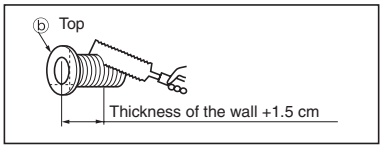


Drilling of holes and fixture of sleeve (Option parts)

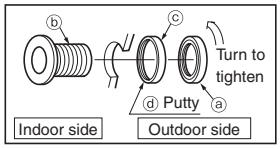
When drilling the wall that contains a metal lath, wire lath or metal plate, be sure to use pipe hole sleeve sold separately.

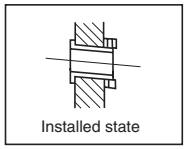


○Drill a hole with whole core drill.



○In case of rear piping draw out, cut off the lower and the right side portions of the sleeve collar.



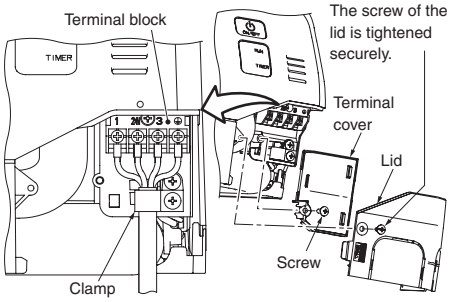


Preparation of indoor unit

Mounting of connecting wires

① Remove the lid, the terminal cover and wiring clamp.
② Connect the connecting wire securely to the terminal block.
1) Connect the connection wire securely to the terminal block. If the wire is not affixed completely, contact will be poor, and it is dangerous as the terminal block may heat up and catch fire.
2) Take care not to confuse the terminal numbers for indoor and outdoor connections.
③ Fix the connecting wire by wiring clamp.
④ Attach the terminal cover and lid.

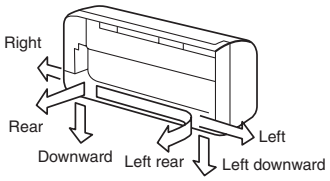
⚠ CAUTION
• In case of faulty wiring connection, the indoor unit stops, and then the run lamp turns on and the timer lamp blinks.



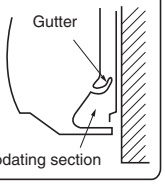
○Perform wiring, please take care of connecting the terminal number of outdoor unit terminal block.

Installing the support of piping

Piping is possible in the rear, left, left rear, left downward, right or downward direction.



Since this air conditioner has been designed to collect dew drops on the rear surface to the drain pan, do not attach the power cord above the gutter.

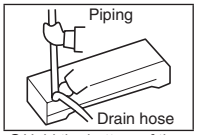


Use cables for interconnection wiring to avoid loosening of the wires. CENELEC code for cables Required field cables.

H05RNR4G1.5 (Example) or 245ICE57

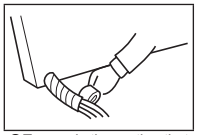
H	Harmonized cable type
05	300/500 volts
R	Natural-and/or synch. rubber wire insulation
N	Polychloroprene rubber conductors insulation
R	Stranded core
4 or 5	Number of conductors
G	One conductor of the cable is the earth conductor (yellow/green)
1.5	Section of copper wire (mm²)

Shaping of pipings



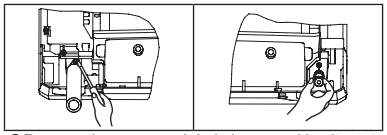
○Hold the bottom of the piping and fix direction before stretching it and shaping it.
Sufficient care must be taken not to damage the panel when connecting pipes.

Taping of the exterior

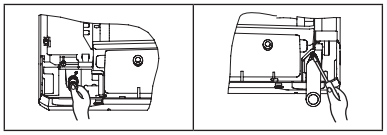


○Tape only the portion that goes through the wall.
○Always tape the wiring with the piping.

[Drain hose changing procedures]



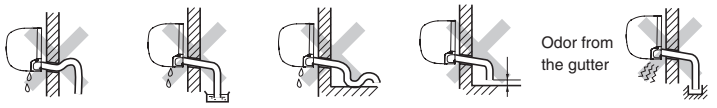
○Remove the screw and drain hose, making it rotate.
○Remove it with hand or pliers.
○Insert the drain cap.
○Insert the drain hose securely, making rotate. And install the screw.



Note:
Be careful that If it is not inserted securely, water leakage may occur.

Drainage

○ Arrange the drain hose in a downward angle.
○ Avoid the following drain piping.



Higher than specified | The drain hose tip is in water. | Wavy | The gap to the ground is 5 cm or less. | The drain hose tip is in the gutter.

⚠ CAUTION
• Go through all installation steps and check if the drainage is all right. Otherwise, water leak may occur.

○ Pour water to the drain pan located under the heat exchanger, and ensure that the water is discharged outdoor.
○ When the extended drain hose is indoor, securely insulate it with a heat insulator available in the market.

Installation of the outdoor unit

Fixing of outdoor

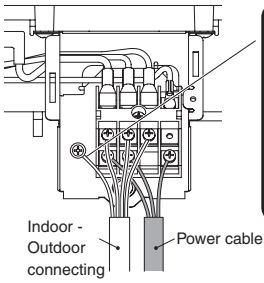
○ Make sure that the unit is stable in installation. Fix the unit to stable base.
○ When installing the unit at a higher place or where it could be toppled by strong winds, secure the unit firmly with foundation bolts, wire, etc.

Electric wiring work

○Perform wiring, making wire terminal numbers conform to terminal numbers of indoor unit terminal block.
○Connect using ground screw located near ⏚ mark.
○Always perform grounding system installation work with the power cord unplugged.
○Connect a pair bearing a common terminal number with an indoor-outdoor connecting wire.
○Fasten cables securely with cable clamps so that no external force may work on terminal connections.
○Grounding terminals are provided in the control box.

⚠ CAUTION
• Always use an earth leakage circuit breaker designed for inverter circuits to prevent a faulty operation.

Phase		Switchgear or Circuit Breaker		Power source (minimum)	Interconnecting and grounding wires (minimum)
	Earth leakage breaker	Switch breaker	Over current protector rated capacity		
Single -phase	15A, 30mA, 0.1sec or less	30A	16A	2.0mm²	16A 1.5mm² X 4



power cable, indoor - outdoor connecting wire circuit diagram

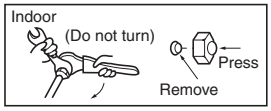
⚠ CAUTION
• Please connect the earthed line of indoor and outdoor connecting wire to a bracket part of the illustration.

○Switchgear or Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
○The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

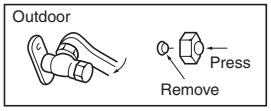
Connection of refrigerant pipings

Preparation

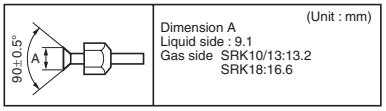
Keep the openings of the pipes covered with tapes etc. to prevent dust, sand, etc. from entering them.



○Remove the flared nuts. (on both liquid and gas sides)



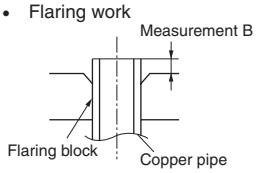
○Remove the flared nuts. (on both liquid and gas sides)



○Install the removed flared nuts to the pipes to be connected, then flare the pipes.

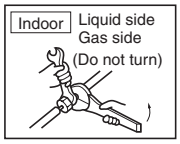
⚠ CAUTION
• Do not apply refrigerating machine oil to the flared surface.

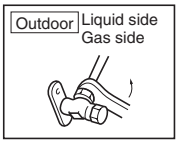
• Flaring work



Copper pipe diameter	Measurement B (mm)			Use a flare tool designed for R410A or a conventional flare tool. Please note that measurement B (protrusion from the flaring block) will vary depending on the type of a flare tool in use. If a conventional flare tool is used, please use a copper pipe gauge or a similar instrument to check protrusion so that you can keep measurement B to a correct value.
	Clutch type flare tool for R410A	Conventional (R22) flare tool		
		Clutch type	Wing nut type	
ϕ6.35	0.0~0.5	1.0~1.5	1.5~2.0	
ϕ9.52	0.0~0.5	1.0~1.5	1.5~2.0	
ϕ12.7	0.0~0.5	1.0~1.5	2.0~2.5	

Connection





○Connect the pipes on both liquid and gas sides.
○Tighten the nuts to the following torque.

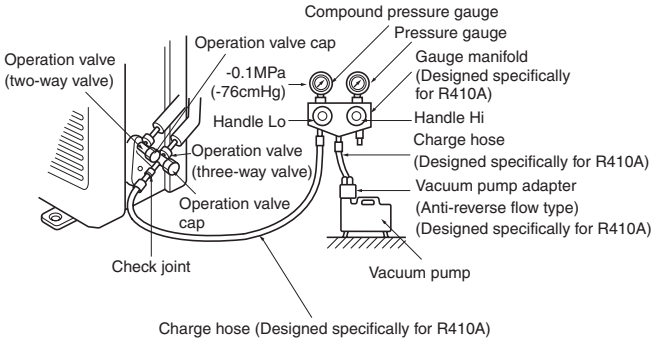
		N·m	(kgf·m)
Liquid side	(ϕ6.35)	14.0 ~ 18.0	(1.4~1.8)
Gas side	(ϕ9.52)	34.0 ~ 42.0	(3.4~4.2)
	(ϕ12.7)	49.0 ~ 61.0	(4.9~6.1)

⚠ CAUTION
• Do not apply excess torque to the flared nuts. Otherwise, the flared nuts may crack depending on the conditions and refrigerant leak may occur.

Air purge

① Tighten all flare nuts in the pipings both indoor and outside wall so as not to cause leak.
② Connect operation valve, charge hose, manifold valve and vacuum pump as is illustrated right.
③ Open manifold valve handle Lo to its full width, and perform vacuum or evacuation.
Continue the vacuum or evacuation operation for 15 minutes or more and check to see that the vacuum gauge reads -0.1MPa.
④ After completing vacuum operation, close the Lo handle and stop operation of the vacuum pump.
⑤ After completing vacuum operation, fully open operation valve (Both gas and liquid sides) with hexagon headed wrench.
⑥ Check for possible leakage of gas in the connection parts of both indoor and outdoor.

• Since the system uses check joints differing in diameter from those found on the conventional models, a charge hose (for R22) presently in use is not applicable. Please use one designed specifically for R410A.
• Please use an anti-reverse flow type vacuum pump adapter so as to prevent vacuum pump oil from running back into the system. Oil running back into an air-conditioning system may cause the refrigerant cycle to break down.



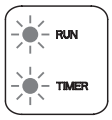
Securely tighten the operation valve cap and the check joint blind nut after adjustment.

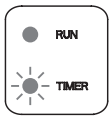
Operation valve size (mm)	Operation valve cap tightening torque (N·m)	Check joint blind nut tightening torque (N·m)
ϕ6.35 (1/4")	20 ~ 30	10 ~ 12
ϕ9.52 (3/8")		
ϕ12.7 (1/2")	25 ~ 35	

Self diagnosis function

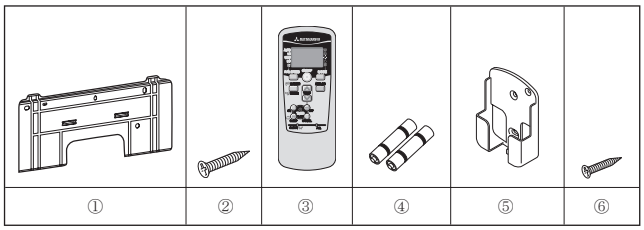
■ We are constantly trying to do better service to our customers by installing such judges that show abnormality of each function as follows:

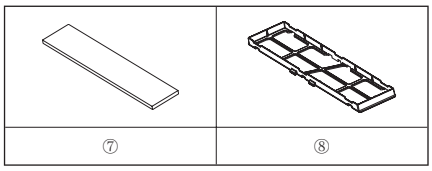
	RUN light	Description of trouble	Cause
TIMER light ON	1-time flash	Heat exchanger sensor error	• Broken heat exchanger sensor wire, poor connector connection
	2-time flash	Room temperature sensor error	• Broken room temperature sensor wire, poor connector connection
	5-time flash	Active filter voltage error	• Defective power supply
	6-time flash	Indoor fan motor error	• Defective fan motor, poor connector connection

	TIMER light	Description of trouble	Cause
 RUN light keeps flashing	1-time flash	Outdoor temperature sensor error	• Broken outdoor sensor wire, poor connector connection
	2-time flash	Outdoor heat exchanger fluid pipe sensor error	• Broken heat exchanger fluid pipe sensor wire, poor connector connection
	4-time flash	Discharge pipe sensor error	• Broken discharge pipe sensor wire, poor connector connection.
RUN light 2 time flash	2-time flash	Rotor lock	• Defective compressor • Open phase on compressor • Defective outdoor unit boards

	TIMER light	Description of trouble	Cause
 RUN light ON	1-time flash	Current cut	• Compressor locking, open phase on compressor output, shortcircuit on power transistor, closed service valve
	2-time flash	Trouble of outdoor unit	• Broken power transistor, broken compressor wire • Broken discharge pipe sensor wire, poor connector connection • Compressor blockage
	3-time flash	Over current	• Overload operation, overcharge
	4-time flash	Power transistor error	• Broken power transistor
	5-time flash	Over heat of compressor	• Gas shortage, defective discharge pipe sensor, closed service valve
	6-time flash	Error of signal transmission	• Defective power supply, Broken signal wire, defective in/outdoor unit boards
	7-time flash	Outdoor fan motor error	• Defective fan motor, poor connector connection
	Keep flashing	Cooling high pressure protection	• Gas over charge, short circuit of outdoor unit

Accessories

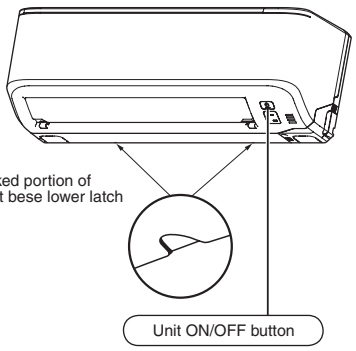




Standard accessories (Installation kit)		Q'ty
①	Installation board (Attached to the rear of the indoor unit)	1
②	Tapping screws (for installation board ϕ4 by 25mm)	5
③	Wireless remote control	1
④	Baterry [R03 (AAA, Micro) 1.5V]	2
⑤	Remote control holder	1
⑥	Wood screw (for remote control switch holder ϕ3.5 by 16mm)	2
⑦	Air-cleaning filters	1
⑧	Filter holders (Attached to the front panel of the indoor unit)	1

• How to remove the indoor unit from the installation board

① Push up at the marked portion of the indoor unit base lower latch, and slightly pull it toward you. (both right and left hand sides)
(The indoor unit base lower latch can be removed from the installation board)
② Push up the indoor unit upward. So the indoor unit will be removed from the installation board.



• How to relocate or dispose of the unit

○In order to protect the environment, be sure to pump down (recovery of refrigerant).
○Pump down is the method of recovering refrigerant from the indoor unit to the outdoor unit when the pipes are removed from the unit.

<How to pump down>
① Connect charge hose to check joint.
② Liquid side : Close the liquid valve with hexagon wrench key.
Gas side : Fully open the gas valve.
Carry out cooling operation. (If indoor temperature is low, operate forced cooling operation.)
③ After low pressure gauge become 0.01MPa, stop cooling operation and close the gas valve.

• Forced cooling operation

Turn on a power supply again after a while after turn off a power supply. Then press continually the ON/OFF button 5 seconds or more.

Installations test check points

Check the following points again after completion of the installation, and before turning on the power.
Conduct a test run again and ensure that the unit operates properly.
At the same time, explain to the customer how to use the unit and how to take care of the unit following the instruction manual.

After installation

- ☐ The power supply voltage is correct as the rating.
- ☐ No gas leaks from the joints of the operation valve.
- ☐ Power cables and crossover wires are securely fixed to the terminal board.
- ☐ The screw of the lid is tightened securely.
- ☐ The screw of the service panel is tightened securely.
- ☐ Operation valve is fully open.
- ☐ The pipe joints for indoor and outdoor pipes have been insulated.

Test run

- ☐ Air conditioning operation is normal.
- ☐ No abnormal noise.
- ☐ Water drains smoothly.
- ☐ Protective functions are not working.
- ☐ The remote control is normal.
- ☐ Operation of the unit has been explained to the customer.

(Three-minute restart preventive timer)
When the air conditioner is restarted or when changing the operation, the unit will not start operating for approximately 3 minutes.
This is to protect the unit and it is not a malfunction.

Necessary tools for the installation work

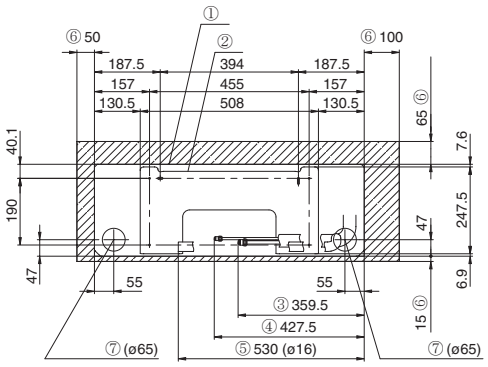
1	Plus headed driver	
2	Knife	
3	Saw	
4	Tape measure	
5	Hammer	
6	Spanner wrench	
7	Torque wrench	(14.0 ~ 62.0N · m (1.4 ~ 6.2kgf · m))
8	Hole core drill (65mm in diameter)	
9	Wrench key (Hexagon) [4m/m]	
10	Vacuum pump	
11	Vacuum pump adapter (Anti-reverse flow type)	
12	Gauge manifold	
13	Change hose	
14	Flaring tool set	
15	Gas leak detector	
16	Gauge for projection adjustment (Used when flare is made by using conventional flare tool)	
17	Pipe bender	
	11, 12, 13, 14, 15 Designed specifically for R410A	

Option parts

a	Sealing plate
b	Sleeve
c	Inclination plate
d	Putty
e	Drain hose (extention hose)
f	Piping cover (for insulation of connection piping)

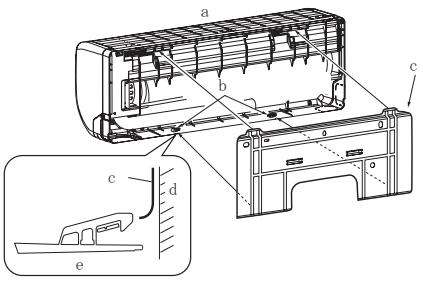
Installation space (indoor unit)

①	Indoor unit
②	Installation board
③	Piping for Gas
④	Piping for Liquid
⑤	Drain hose
⑥	Space for service
⑦	Piping hole



Fixing of indoor unit

ⓐ	Indoor unit
ⓑ	Latch (2 locations)
ⓒ	Installation board
ⓓ	Wall
ⓔ	Indoor unit base lower latch



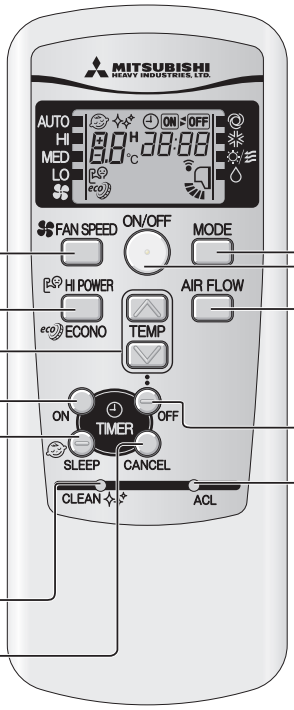
Installation Steps			
①	Pass the pipe through the hole in the wall, and hook the upper part of the indoor unit to the installation board.	②	Gently push the lower part to secure the unit.

7. OUTLINE OF OPERATION CONTROL BY MICROCOMPUTER

(1) Operation control function by remote control

Remote control

◆ **Operation section**



FAN SPEED button

Each time the button is pressed, the ■ display is switched over in turn.

HI POWER/ECONO button

This button changes the HIGH POWER/ ECONOMY mode.

TEMPERATURE button

These buttons set the room temperature. (These buttons are used for setting the current time and timer function as well.)

ON TIMER button

This button selects ON TIMER operation.

SLEEP button

This button selects SLEEP operation.

CLEAN switch

This switch selects the CLEAN mode.

CANCEL button

This button cancels the ON timer, OFF timer, and SLEEP operation.

OPERATION MODE select button

Each time the button pressed, the ■ display is switched over in turn.

ON/OFF (luminous) button

Press to start operation, press again to stop.

AIR FLOW (UP/DOWN) button

This button changes the air flow (up/down) direction.

OFF TIMER button

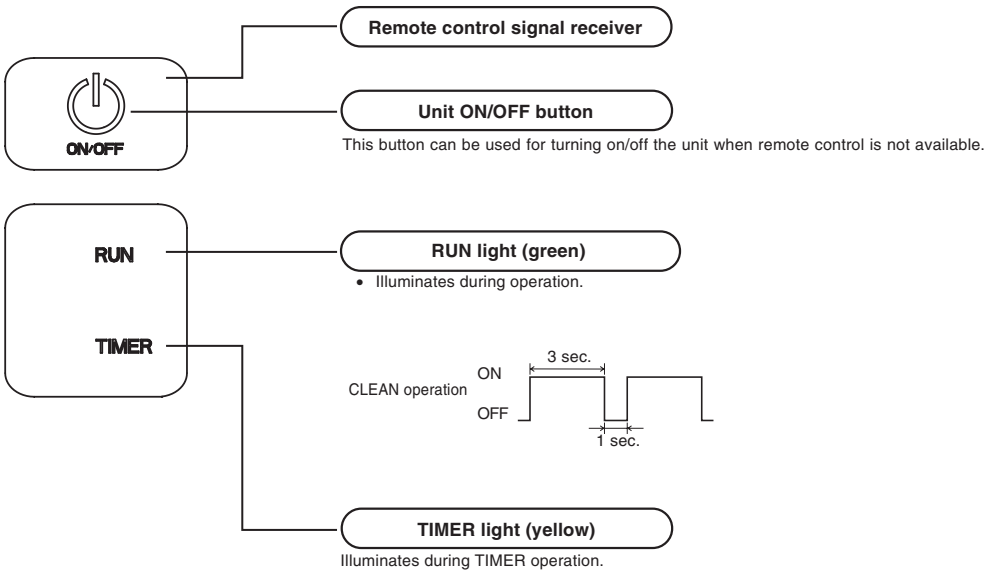
This button selects OFF TIMER operation.

ACL switch

This switch is for resetting microcomputer and setting time.

- The above illustration shows all controls, but in practice only the relevant parts are shown.

Unit display section



Remote control signal receiver

Unit ON/OFF button

This button can be used for turning on/off the unit when remote control is not available.

RUN light (green)

- Illuminates during operation.

TIMER light (yellow)

Illuminates during TIMER operation.

(2) Unit ON/OFF button

When the remote control batteries become weak, or if the remote control is lost or malfunctioning, this button may be used to turn the unit on and off.

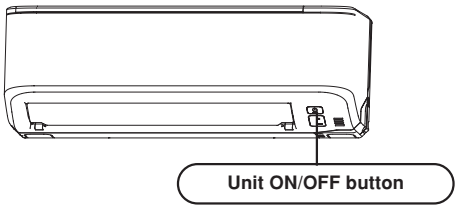
(a) Operation

Push the button once to place the unit in the automatic mode. Push it once more to turn the unit off.

(b) Details of operation

The unit will go into the automatic mode in which it automatically determines, from room temperature (as detected by sensor), whether to go into the cooling or thermal dry modes.

Function / Operation mode	Room temperature setting	Fan speed	Flap	Timer switch
COOL	About 24ºC	Auto	Auto	Continuous
DRY	About 24ºC			



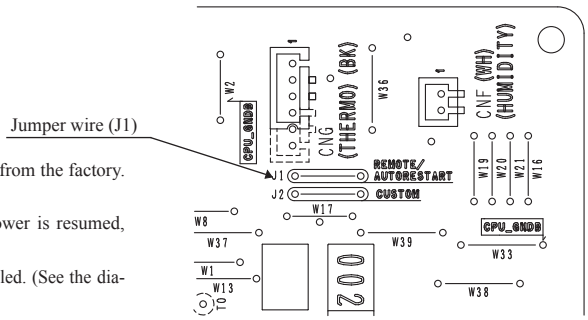
(3) Auto restart function

(a) Auto restart function records the operational status of the air-conditioner immediately prior to be switched off by a power cut, and then automatically resumes operations after the power has been restored.

(b) The following settings will be cancelled:

(i) Timer settings

(ii) HIGH POWER operations



Notes

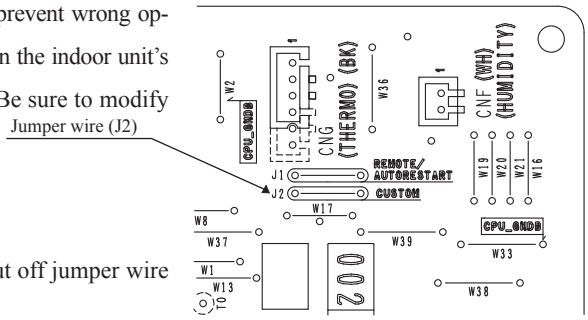
(1) Auto restart function is set at on when the air-conditioner is shipped from the factory. Consult with your dealer if this function needs to be switched off.

(2) When power failure ocurrs, the timer setting is cancelled. Once power is resumed, reset the timer.

(3) If the jumper wire (J1) "AUTO RESTART" is cut, auto restart is disabled. (See the diagram at right)

(4) Custom cord switching procedure

If two wireless remote control are installed in one room, in order to prevent wrong operation due to mixed signals, please modify the printed circuit board in the indoor unit's control box and the remote control using the following procedure. Be sure to modify both boards. If only one board is modified, receiving (and operation) cannot be done.



(a) Modifying the indoor unit's printed circuit board

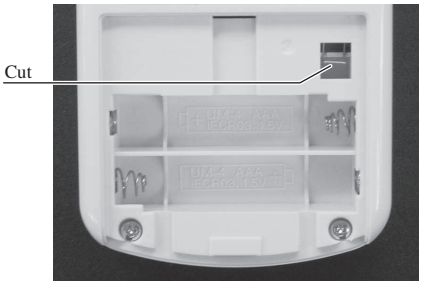
Take out the printed circuit board from the control box and cut off jumper wire (J2) using wire cutters.

After cutting of the jumper wire, take measures to prevent contact with the other the lead wires, etc.

(b) Modifying the wireless remote control

(i) Remove the battery.

(ii) Cut the jumper wire shown in the figure at right.



(5) High power operation

Pressing the HI POWER/ECONO button intensifies the operating power and initiates powerful cooling operation for 15 minutes continuously. The remote control displays and the FAN SPEED display disappears.

(a) During the HIGH POWER operation, the room temperature is not controlled. When it causes an excessive cooling, press the press the HI POWER/ECONO button again to cancel the HIGH POWER operation.

(b) HIGH POWER operation is not available during the DRY and the program timer operations.

(c) When HIGH POWER operation is set after ON TIMER operation, HIGH POWER operation will start from the set time.

(d) When the following operation are set, HIGH POWER operation will be canceled.

① When the HI POWER/ECONO button is pressed again.

② When the operation mode is changed.

③ When it has been 15 minutes since HIGH POWER operation has started.

(e) Not operable while the air conditioner is OFF.

(6) Economy operation

Pressing the HI POWER/ECONO button initiate a soft operation with the power suppressed in order to avoid an excessive cooling or heating. The unit operate 1.5℃ higher than the setting temperature during cooling. The remote control displays ECONO mark and the FAN SPEED display disappears.

(a) It will go into ECONOMY operation at the next time the air conditioner runs in the following cases.

① When the air-conditioner is stopped by ON/OFF button during ECONOMY operation.

② When the air-conditioner is stopped in SLEEP or OFF TIMER operation during ECONOMY operation.

③ When the operation is retrieved from CLEAN operation.

(b) When the following operation are set, ECONOMY operation will be canceled.

① When the HI POWER/ECONO button is pressed again.

② When the operation mode is changed DRY to FAN.

(c) Not operable while the air-conditioner is OFF.

(d) The setting temperature is adjusted according to the following table.

Item \ Mode	Cooling
Temperature adjustment	①＋0. 5
	②＋1. 0
	③＋1. 5

① at the start of operation.

② one hour after the start of operation.

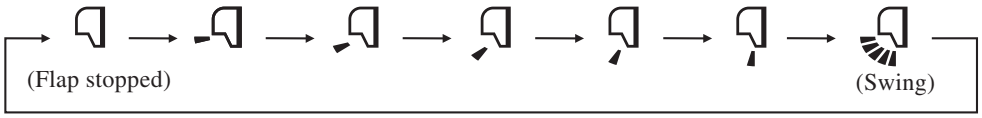
③ two hours after the start of operation.

(7) Flap control

Control the flap by AIRFLOW ⬍ (UP/DOWN) button on the wireless remote control.

(a) Flap

Each time when you press the AIRFLOW ⬍ (UP/DOWN) button the mode changes as follows.



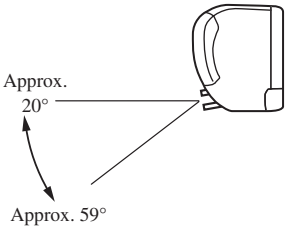
• Angle of flap from horizontal

Remote control display					
COOL , DRY	Approx. 15°	Approx. 25°	Approx. 35°	Approx. 45°	Approx. 59°

(b) Swing

Flap moves in upward and downward directions continuously.

◆ In COOL, DRY operation



(c) Memory flap

When you press the AIRFLOW (UP/DOWN) button once while the flap is operating, it stops swingingat an angle. Since this angle is memorized in the microcomputer, the flap will automatically be set at this angle when the next operation is started.

(d) When not operating

The flap returns to the position of air flow directly below, when operation has stopped.

(8) Timer operation

(a) Comfortable timer setting (ON timer)

If the timer is set at ON when the operation select switch is set at the cooling or heating, or the cooling or heating in auto mode operation is selected, the comfortable timer starts and determines the starting time of next operation based on the initial value of 15 minutes and the relationship between the room temperature at the setting time (temperature of room temperature sensor) and the setting temperature.

(b) Sleep timer operation

Pressing the SLEEP button causes the temperature to be controlled with respect to the set temperature.

(c) OFF timer operation

The Off timer can be set at a specific time (in 10-minute units) within a 24-hour period.

(9) Outline of cooling operation

(a) Operation of major functional components in cooling mode

	Cooling		
	Thermostat ON	Thermostat OFF	Failure
Compressor	ON	OFF	OFF
Indoor fan motor	ON	ON	ON
Outdoor fan motor	ON	OFF (few minutes ON)	OFF (few minutes ON)

(b) Detail of control in each mode (Pattern)

(i) Fuzzy operation

During the fuzzy operation, the air flow and the compressor command speed are controlled by calculating the difference between the room temperature setting correction temperature and the suction air temperature.

Model / Fan speed	SRK10	SRK13	SRK18
AUTO	20~74rps	20~98rps	12~96rps
HI	20~74rps	20~98rps	12~96rps
MED	20~52rps	20~74rps	12~62rps
LO	20~38rps	20~46rps	12~38rps

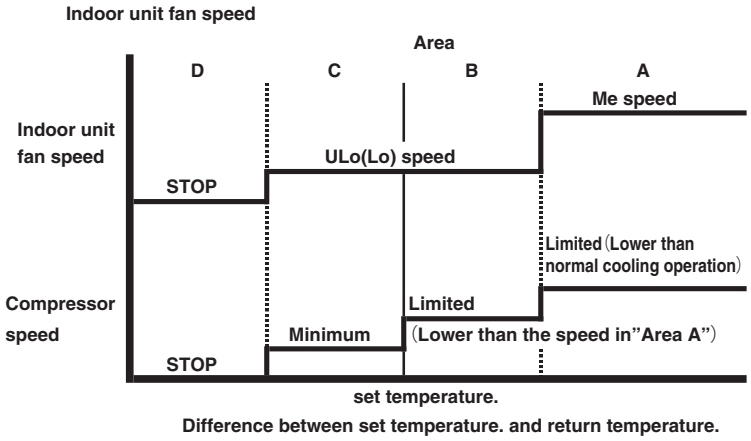
(10) Outline of dry(dehumidifying) operation

(a) Purpose of DRY mode

The purpose is "Dehumidification", and not to control the humidity to the target condition.
Indoor/outdoor unit control the operation condition to reduce the humidity, and also prevent over cooling.

(b) Outline of control

(i) Indoor unit fan speed and compressor are controlled by the area which is selected by the temperature difference.



(ii) The indoor unit check the current area by every 5 minutes, and operate by the next checking.

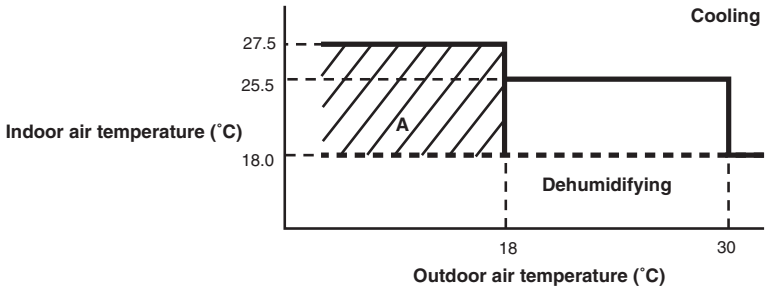
(c) Other

When the outside temperature. and room temperature. is low for cooling operation, indoor unit can not operate in cooling, and dehumidify. In this case, the units operate in heating to rise the room temperature and after that start DRY operation.

(11) Outline of automatic operation

(a) Determination of operation mode

The unit checks the indoor air temperature and the outdoor air temperature, determines the operation mode, and then begins in the automatic operation.



(b) The unit checks the temperature every hour after the start of operation and, if the result of check is not same as the previous operation mode, changes the operation mode.

(i) If the setting temperature is changed with the remote control, the operation mode is judged immediately.

(ii) When both the indoor and the outdoor air temperatures are in the range "A", cooling or dehumidifying is switched depending on the difference between the setting temperature and the indoor air temperature.

(iii) When the operation mode has been judged following the change of setting temperature with the remote control, the hourly judgment of operation mode is cancelled.

(c) When the unit is started again within one hour after the stop of automatic operation or when the automatic operation is selected during cooling or dehumidifying operation, the unit is operated in the previous operation mode.

(d) Setting temperature can be adjusted within the following range. There is the relationship as shown below between the signals of the wireless remote control and the setting temperature.

		Signals of wireless remote control (Display)												
		–6	–5	–4	–3	–2	–1	±0	+1	+2	+3	+4	+5	+6
Setting temperature	Cooling	18	19	20	21	22	23	24	25	26	27	28	29	30
	Dehumidifying	19	20	21	22	23	24	25	26	27	28	29	30	31

(e) When the unit is operated automatically with the wired remote control connected, the cooling operation is controlled according to the display temperatures while the setting temperature is compensated by + 1˚C during dehumidifying.

(12) Protection control function

(a) Dew prevention control [Cooling]:Prevents dewing on the indoor unit.

(i) Operating conditions: When the following conditions have been met for more than 30 minutes after starting operation.

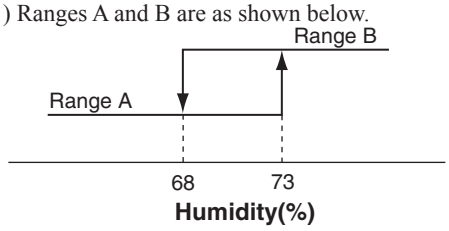
1) Compressor's command speed is 32 rps or higher. (SRK10, 13 only)
2) Detected value of humidity is 68% or higher.

(ii) Contents of operation

1) Air capacity control

Item \ Model		SRK10, 13	SRK18
LO	Upper limit of compressor's command speed	RangeA: 45rps, RangeB: 45rps	RangeA: 50rps, RangeB: 34rps
	Indoor fan	4th speed	
AUTO,HI,MED	Upper limit of compressor's command speed	RangeA: 45rps, RangeB: 45rps	RangeA: 50rps, RangeB: 34rps
	Indoor fan	Adaptable to compressor's command speed (Lower limit 4th speed)	

Note (1) Ranges A and B are as shown below.



2) When this control has continued for more than 30 minutes continuously,the following wind direction control is performed.
   a) When the vertical wind direction is set at other than the vertical swing,the flaps change to the horizontal position.
   b) When the horizontal wind direction is set at other than the horizontal swing,the louver changes to the vertical position.

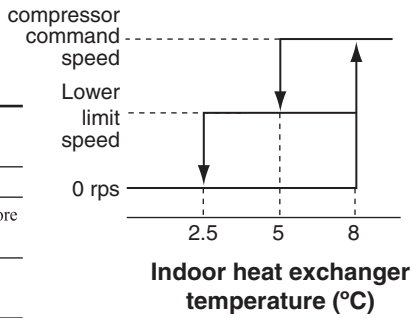
(iii) Resetting condition: When any of followings is metdirec

1) Compressor's command speed is less than 32 rps. (SRK10, 13 only)
2) Detected value of humidity is less than 63%.

(b) Frost prevention control (During cooling or dehumidifying)

(i) Operating conditions

1) Indoor heat exchanger temperature (Th2) is lower than 5ºC.
2) 5 minutes after reaching the compressor command speed except 0 rps.



(ii) Detail of anti-frost operation

Item \ Indoor heat exchanger temperature	5°C or lower	2.5°C or lower
Lower limit of compressor command speed	22 rps	0 rps
Indoor fan	Depends on operation mode	Protects the fan tap just before frost prevention control
Outdoor fan	Depends on command speed	Depends on stop mode

Notes (1) When the indoor heat exchanger temperature is in the range of 2.5~5ºC, the speed is reduced by 4 rps at each 20 seconds.
(2) When the temperature is lower than 2.5ºC, the compressor is stopped.
(3) When the indoor heat exchanger temperature is in the range of 5~8ºC, the compressor command speed is been maintained.

(iii) Reset conditions: When either of the following condition is satisfied.

1) The indoor heat exchanger temperature (Th2) is 8ºC or higher.
2) The compressor command speed is 0 rps.

(c) Cooling overload protective control

(i) Operating conditions: When the outdoor air temperature (TH2) has become continuously for 30 seconds at 41ºC or more, or 47ºC or more (Model SRK18: 41ºC or more) with the compressor running, the lower limit speed of compressor is brought up.

Item \ Model	SRK10, 13		SRK18
Outdoor air temperature	41°C or more	47°C or more	41°C or more
Lower limit speed	30 rps	45 rps	30 rps

(ii) Detail of operation

1) The outdoor fan is stepped up by 3 speed step. (Upper limit 8th speed.)
2) The lower limit of compressor command speed is set to 30 or 45 (model SRK18 : 30) rps and even if the calculated result becomes lower than that after fuzzy calculation, the speed is kept to 30 or 45 (model SRK18) rps. However, when the thermo OFF, the speed is reduced to 0 rps.

(iii) Reset conditions: When either of the following condition is satisfied.

1) The outdoor air temperature is lower than 40ºC.
2) The compressor command speed is 0 rps.

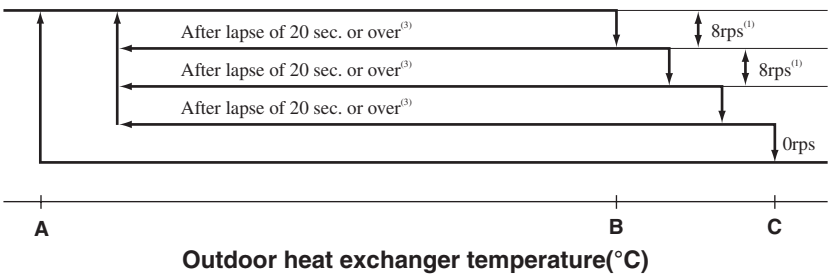
(d) Cooling high pressure control

(i) Purpose: Prevents anomalous high pressure operation during cooling.

(ii) Detector: Outdoor heat exchanger sensor (TH1)

(iii) Detail of operation:

(Example) Fuzzy



Notes (1) When the outdoor heat exchanger temperature is in the range of B~C ºC, the speed is reduced by 8 rps at each 20 seconds.
(2) When the temperature is C ºC or higher, the compressor is stopped.
(3) When the outdoor heat exchanger temperature is in the range of A~B ºC, if the compressor command speed is been maintained and the operation has continued for more than 20 seconds at the same speed, it returns to the normal cooling operation.

- **Temperature list**

	A	B	C
Outdoor air temperature ≧ 32 ºC	50	52	56
Outdoor air temperature < 32 ºC	42	44	50

(e) Cooling low outdoor air temperature protective control

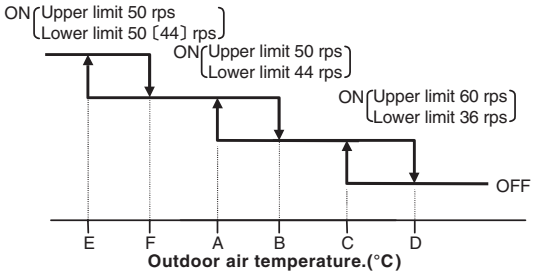
(i) Operating conditions: When the outdoor air temperature (TH2) is 22ºC or lower continues for 20 seconds while the compressor command speed is other than 0 rps.

(ii) Detail of operation:

1) The lower limit of the compressor command speed is set to 50〔44〕<44> (36) rps and even if the speed becomes lower than 50〔44〕<44> (36) rps, the speed is kept to 50〔44〕<44> (36) rps. However, when the thermo OFF, thespeed is reduced to 0 rps.

2) The upper limit of the compressor command speed is set to 50 <50> (60) rps and even if the calculated result be comes higher than that after fuzzy calculation, the speed is kept to 50 <50> (60) rps.

Notes (1) Values in < > are for outdoor air temperature is AºC or BºC
(2) Values in ( ) are for outdoor air temperature is CºC or DºC
(3) Values in 〔 〕 are for the model SRK18.



● Values of A, B, C, D, E, F (Models SRK10, 13)

	Outdoor air temperature (˚C)					
	E	F	A	B	C	D
First time	–8	–5	0	3	22	25
After the second times	–2	1	5	8	25	28

● Values of A, B, C, D, E, F (Model SRK18)

	Outdoor air temperature (˚C)					
	E	F	A	B	C	D
First time	0	2	9	11	22	25
After the second times	5	7	16	19	25	28

(iii) Reset conditions: When either of the following condition is satisfied

1) The outdoor air temperature (TH2) is D ºC or higher.

2) The compressor command speed is 0 rps.

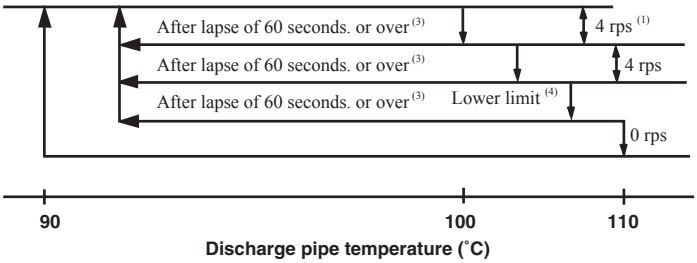
(f) Compressor overheat protection

(i) Purpose: It is designed to prevent deterioration of oil, burnout of motor coil and other trouble resulting from the compressor overheat.

(ii) Detail of operation

1) Speeds are controlled with temperature detected by the sensor mounted on the discharge pipe.

(Example) Fuzzy



Notes (1) When the discharge pipe temperature is in the range of 100 to 110 ºC, the speed is reduced by 4 rps.

(2) When the discharge pipe temperature is raised and continues operation for 20 seconds without changing, then the speed is reduced again by 4 rps.

(3) If the discharge pipe temperature is in the range of 90~100ºC even when the compressor command speed is maintained for 60 second when the temperature is in the range of 90~100ºC, the speed is raised by 1 rps and kept at that speed for 60 second. This process is repeated until the command speed is reached.

(4) Lower limit speed

	Cooling
Models SRK10, 13, 18	20 rps

2) If the temperature of 110ºC is detected by the sensor on the discharge pipe, then the compressor will stop immediately. When the discharge pipe temperature drops and the time delay of 3 minutes is over, the unit starts again within 1 hour but there is no start at the third time.

(g) Current safe

(i) Purpose: Current is controlled not to exceed the upper limit of the setting operation current.

(ii) Detail of operation: Input current to the converter is monitored with the current sensor fixed on the printed circuit board of the outdoor unit and, if the operation current value reaches the limiting current value, the compressor command speed is reduced.

If the mechanism is actuated when the speed of compressor command is less than 30 rps, the compressor is stopped immediately. Operation starts again after a delay time of 3 minutes.

(h) Current cut

(i) Purpose: Inverter is protected from overcurrent.

(ii) Detail of operation: Output current from the converter is monitored with a shunt resistor and, if the current exceeds the setting value, the compressor is stopped immediately. Operation starts again after a delay time of 3 minutes.

(i) Outdoor unit failure

This is a function for determining when there is trouble with the outdoor unit during air conditioning.

The compressor is stopped if any one of the following in item (i), (ii) is satisfied. Once the unit is stopped by this function, it is not restarted.

(i) When the input current is measured at 1 A or less for 3 continuous minutes or more.

(ii) If the compressor command sends a 0 rps signal to the indoor unit 3 times or more within 20 minutes of the power being turned on.

(j) Indoor fan motor protection

When the air conditioner is operating and the indoor fan motor is turned ON, if the indoor fan motor has operated at 300 min^{-1} or under for more than 30 seconds, the unit enters first in the stop mode and then stops the entire system.

(k) Serial signal transmission error protection

(i) Purpose: Prevents malfunction resulting from error on the indoor ↔ outdoor signals.

(ii) Detail of operation: If the compressor is operating and a serial signal cannot be received from the indoor control with outdoor control having serial signals continues for 7 minute and 35 seconds, the compressor is stopped.

After the compressor has been stopped, it will be restarted after the compressor start delay if a serial signal can be received again from the indoor control.

(l) Rotor lock

If the motor for the compressor does not turn after it has been started, it is determined that a compressor lock has occurred and the compressor is stopped.

(m) Outdoor fan motor protection

If the outdoor fan motor has operated at 75 min^{-1} or under for more than 30 seconds, the compressor and fan motor are stopped.

(n) Outdoor fan control at low outdoor temperature

(i) Cooling

1) Operating conditions: When the outdoor air temperature (TH2) is 22ºC or lower continues for 30 seconds while the compressor command speed is other than 0 rps.

2) Detail of operation: After the outdoor fan operates at A speed for 60 seconds; the corresponding outdoor heat exchanger temperature shall implement the following controls.

● Value of A

	Outdoor fan
Outdoor temperature > 10˚C	2nd speed
Outdoor temperature ≦ 10˚C	1st speed

a) Outdoor heat exchanger temperature (TH1) ≦ 21ºC
After the outdoor fan speed drops (down) to 1 speed for 60 seconds; if the outdoor heat exchanger tempera ture is lower than 21ºC, gradually reduce the outdoor fan speed by 1 speed. (Lower limit 1st speed)

b) 21ºC < Outdoor heat exchanger temperature (TH1) ≦ 38ºC
After the outdoor fan speed maintains at A speed for 20 seconds; if the outdoor heat exchanger temperature is 21ºC~38ºC, maintain outdoor fan speed.

c) Outdoor heat exchanger tempeature (TH1) > 38ºC
After the outdoor fan speed rises (up) to 1 speed for 60 seconds; if the outdoor heat exchanger temperature is higher than 38ºC, gradually increase outdoor fan speed by 1 speed. (Upper limit 3rd speed)

3) Reset conditions: When either of the following conditions is satisfied

a) The outdoor air temperature (TH2) is 25ºC or higher.

b) The compressor command speed is 0 rps.

8. MAINTENANCE DATA

(1) Cautions

(a) If you are disassembling and checking an air conditioner, be sure to turn off the power before beginning. When working on indoor units, let the unit sit for about 1 minute after turning off the power before you begin work. When working on an outdoor unit, there may be an electrical charge applied to the main circuit (electrolytic condenser), so begin work only after discharging this electrical charge (to DC 10 V or lower).

(b) When taking out printed circuit boards, be sure to do so without exerting force on the circuit boards or package components.

(c) When disconnecting and connecting connectors, take hold of the connector housing and do not pull on the lead wires.

(2) Items to check before troubleshooting

(a) Have you thoroughly investigated the details of the trouble which the customer is complaining about?

(b) Is the air conditioner running? Is it displaying any self-diagnosis information?

(c) Is a power supply with the correct voltage connected?

(d) Are the control lines connecting the indoor and outdoor units wired correctly and connected securely?

(e) Is the outdoor unit's service valve open?

(3) Troubleshooting procedure (If the air conditioner does not run at all)

If the air conditioner does not run at all, diagnose the trouble using the following troubleshooting procedure. If the air conditioner is running but breaks down, proceed to troubleshooting step (4).

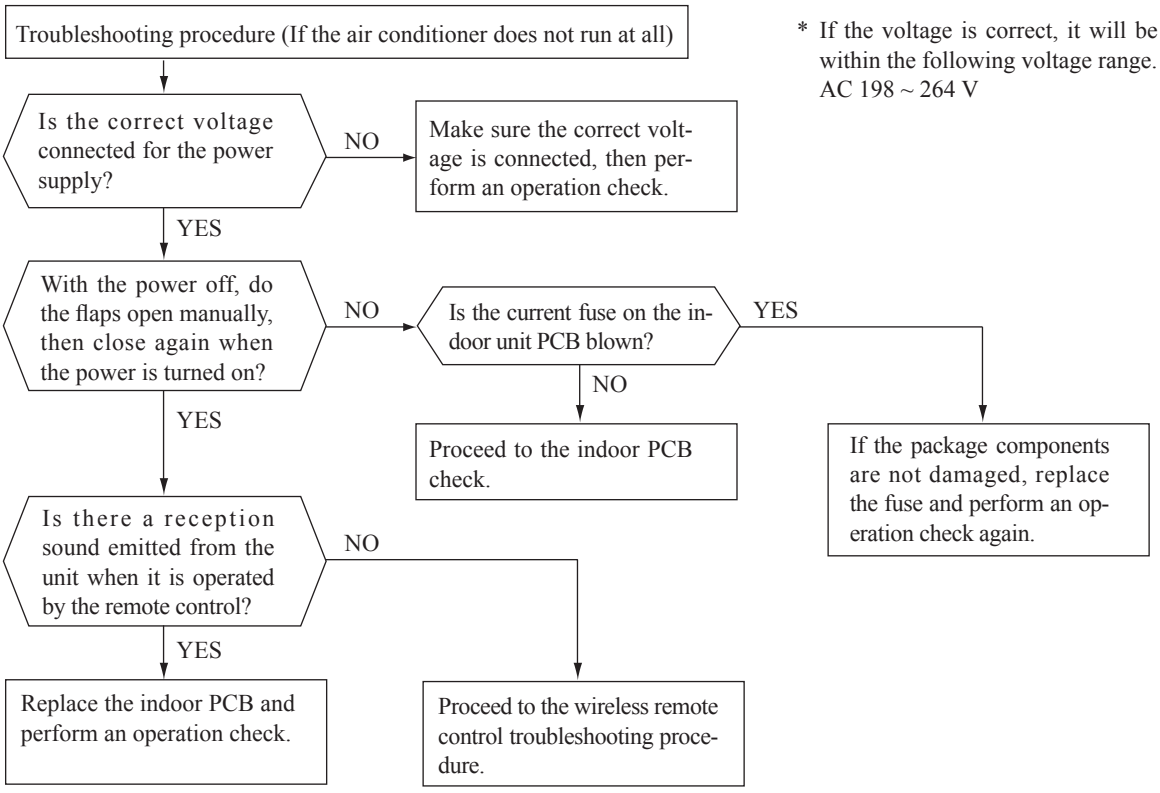
Important When all the following conditions are met, we say that the air conditioner will not run at all.

(a) The RUN light does not light up.

(b) The flaps do not open.

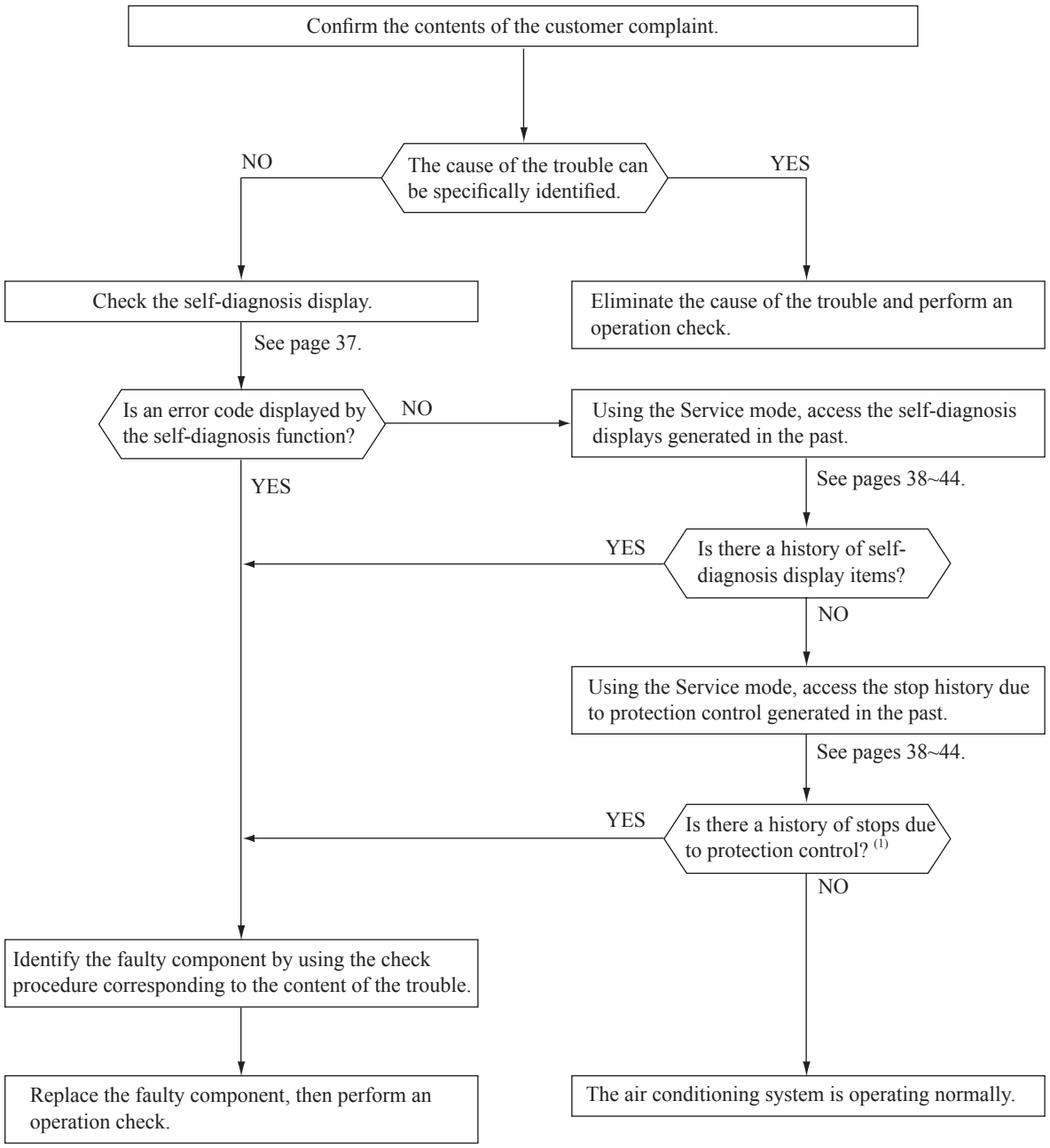
(c) The indoor unit fan motors do not run.

(d) The self-diagnosis display does not function.


Troubleshooting procedure (If the air conditioner does not run at all)
Is the correct voltage connected for the power supply?
NO
Make sure the correct voltage is connected, then perform an operation check.
YES
With the power off, do the flaps open manually, then close again when the power is turned on?
NO
Is the current fuse on the indoor unit PCB blown?
YES
NO
Proceed to the indoor PCB check.
If the package components are not damaged, replace the fuse and perform an operation check again.
YES
Is there a reception sound emitted from the unit when it is operated by the remote control?
NO
YES
Replace the indoor PCB and perform an operation check.
Proceed to the wireless remote control troubleshooting procedure.

* If the voltage is correct, it will be within the following voltage range.
AC 198 ~ 264 V

(4) Troubleshooting procedure (If the air conditioner runs)


Confirm the contents of the customer complaint.
The cause of the trouble can be specifically identified.
NO
YES
Check the self-diagnosis display.
See page 37.
Eliminate the cause of the trouble and perform an operation check.
Is an error code displayed by the self-diagnosis function?
NO
YES
Using the Service mode, access the self-diagnosis displays generated in the past.
See pages 38~44.
Is there a history of self-diagnosis display items?
YES
NO
Using the Service mode, access the stop history due to protection control generated in the past.
See pages 38~44.
Is there a history of stops due to protection control? (1)
YES
NO
Identify the faulty component by using the check procedure corresponding to the content of the trouble.
Replace the faulty component, then perform an operation check.
The air conditioning system is operating normally.

Note (1) Even in cases where only intermittent stop data are generated, the air conditioning system is normal. However, if the same protective operation recurs repeatedly (3 or more times), it will lead to customer complaints. Judge the conditions in comparison with the contents of the complaints.

(5) Self-diagnosis table

When this air conditioner performs an emergency stop, the reason why the emergency stop occurred is displayed by the flashing of display lights. If the air conditioner is operated using the remote control 3 minutes or more after the emergency stop, the trouble display stops and the air conditioner resumes operation. (1)

Indoor unit display section		Description of trouble	Cause	Display (flashing) condition
RUN light	TIMER light			
1 - time flash	ON	Indoor heat exchanger sensor error	• Broken heat exchanger sensor wire, poor connector connection • Indoor PCB is faulty	When a heat exchanger sensor wire disconnection is detected while operation is stopped. (If a temperature of –28ºC or lower is detected for 15 seconds, it is judged that the wire is disconnected.) (Not displayed during operation.)
2 - time flash	ON	Room temperature sensor error	• Broken room temperature sensor wire, poor connector connection • Indoor PCB is faulty	When a room temperature sensor wire disconnection is detected while operation is stopped. (If a temperature of –45ºC or lower is detected for 15 seconds, it is judged that the wire is disconnected.) (Not displayed during operation.)
5 - time flash	ON	Active filter voltage error	• Defective active filter	When the wrong voltage connected for the power supply. When the outdoor PCB is faulty.
6 - time flash	ON	Indoor fan motor error	• Defective fan motor, poor connector connection	When conditions for turning the indoor unit's fan motor on exist during air conditioner operation, an indoor unit fan motor speed of 300 min^{-1} or lower is measured for 30 seconds or longer. (The air conditioner stops.)
7 - time flash	ON	Refrigeration cycle system protective control	• Service valve is closed. • Refrigerant is insufficient	When refrigeration cycle system protective control operates.
Keeps flashing	1 - time flash	Outdoor air temperature sensor error	• Broken outdoor air temp. sensor wire, poor connector connection • Outdoor PCB is faulty	-55℃ or lower is detected for 5 seconds continuously 3 times within 40 minutes after initial detection of this anomalous temperature. Or -55℃ or lower is detected for within 20 seconds after power ON. (The compressor is stopped.)
Keeps flashing	2 - time flash	Outdoor heat exchanger sensor error	• Broken heat exchanger sensor wire, poor connector connection • Outdoor PCB is faulty	-55℃ or lower is detected for 5 seconds continuously 3 times within 40 minutes after initial detection of this anomalous temperature. Or -55℃ or lower is detected for within 20 seconds after power ON. (The compressor is stopped.)
Keeps flashing	4 - time flash	Discharge pipe sensor error	• Broken discharge pipe sensor wire, poor connector connection • Outdoor PCB is faulty	-25℃ or lower is detected for 5 seconds continuously 3 times within 40 minutes after initial detection of this anomalous temperature. (The compressor is stopped.)
ON	1 - time flash	Current cut	• Compressor locking, open phase on compressor output, shortcircuit on power transistor, closed service valve	The inverter output current (compressor motor current) exceeds the set value during compressor start. (The air conditioner stops.)
ON	2 - time flash	Trouble of outdoor unit	• Broken compressor wire • Compressor blockage	When there is an emergency stop caused by trouble in the outdoor unit, or the input current value is found to be lower than the set value. (The air conditioner stops.)
ON	3 - time flash	Current safe stop	• Overload operation • Overcharge • Compressor locking	When the compressor command speed is lower than the set value and the current safe has operated. (The compressor is stopped.)
ON	4 - time flash	Power transistor error	• Broken power transistor	When there is an emergency stop caused by trouble in the outdoor unit, or the input current value is found to be lower than the set value continuously for 3 minutes or longer. (The compressor is stopped.)
ON	5 - time flash	Over heat of compressor	• Gas shortage, defective discharge pipe sensor, closed service valve	When the value of the discharge pipe sensor exceeds the set value. (The air conditioner stops.)
ON	6 - time flash	Error of signal transmission	• Defective power supply, Broken signal wire, defective indoor/outdoor PCB	When there is no signal between the indoor PCB and outdoor PCB for 10 seconds or longer (when the power is turned on), or when there is no signal for 7 minute 35 seconds or longer (during operation) (The compressor is stopped).
ON	7 - time flash	Outdoor fan motor error	• Defective fan motor, poor connector connection	When the outdoor unit's fan motor sped continues for 30 seconds or longer at 75 min^{-1} or lower. (3 times) (The air conditioner stops.)
ON	Keeps flashing	Cooling high pressure protection	• Overload operation, over charge • Broken outdoor heat exchange sensor wire • Service valve is closed.	When the value of the outdoor heat exchanger sensor exceeds the set value.
2 - time flash	2 - time flash	Rotor lock	• Defective compressor • Open phase on compressor • Defective outdoor PCB	If the compressor motor's magnetic pole positions cannot be correctly detected when the compressor starts. (The air conditioner stops.)

Notes (1)The air conditioner cannot be restarted using the remote control for 3 minutes after operation stops.

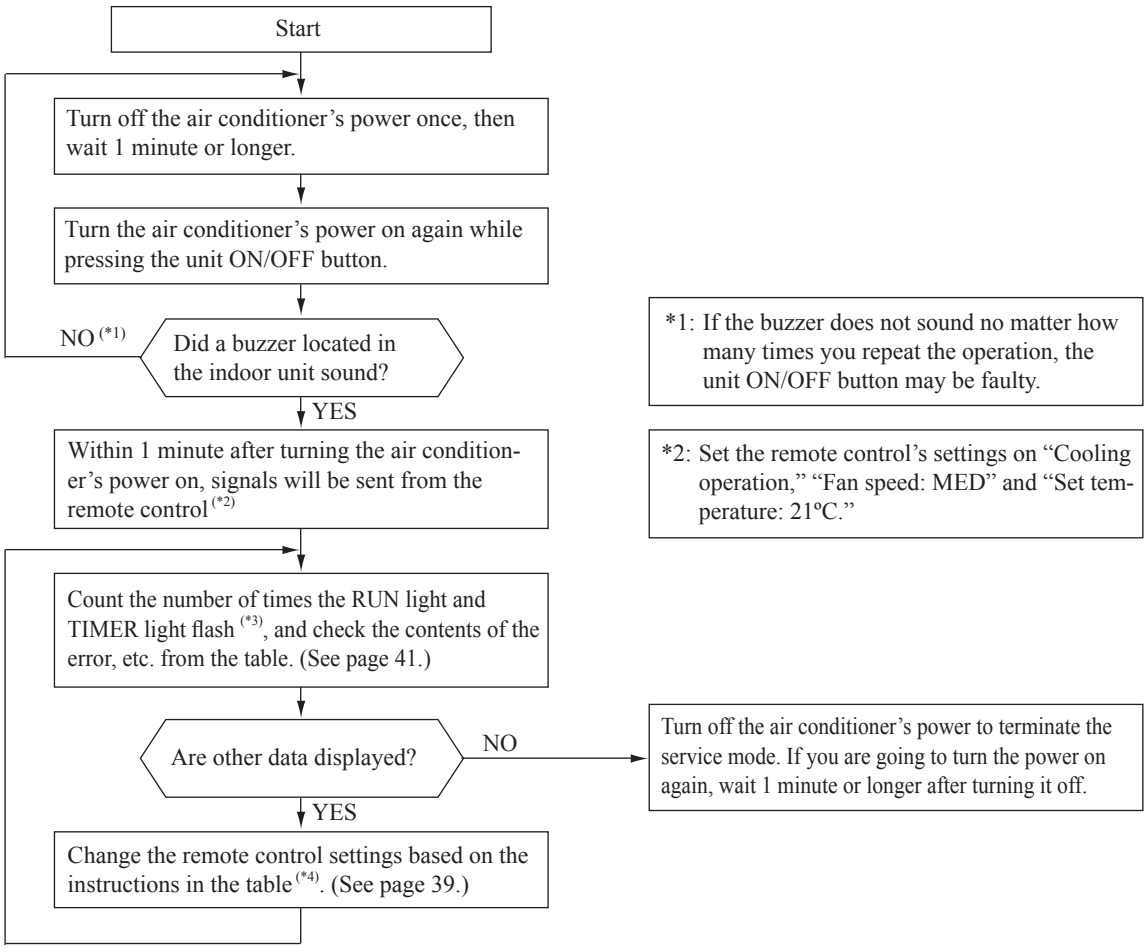
(6) Service mode (Trouble mode access function)

This air conditioner is capable of recording error displays and protective stops (service data) which have occurred in the past. If self-diagnosis displays cannot be confirmed, it is possible to get a grasp of the conditions at the time trouble occurred by checking these service data.

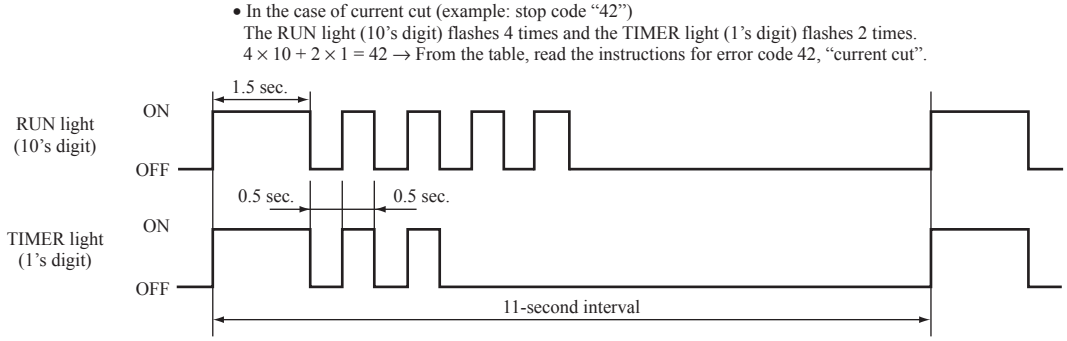
(a) Explanation of terms

Term	Explanation
Service mode	The service mode is the mode where service data are displayed by flashing of the display lights when the operations in item (b) below are performed with the indoor control.
Service data	These are the contents of error displays and protective stops which occurred in the past in the air conditioner system. Error display contents and protective stop data from past anomalous operations of the air conditioner system are saved in the indoor unit control's non-volatile memory (memory which is not erased when the power goes off). There are two types of data, self-diagnosis data and stop data, described below.
Self-diagnosis data	These are the data which display the reason why a stop occurred when an error display (self-diagnosis display) occurred in an indoor unit. Data are recorded for up to 5 previous occurrences. Data which are older than the 5th previous occurrence are erased. In addition, data on the temperature of each sensor (room temperature, indoor heat exchanger, outdoor heat exchanger, outdoor air temperature, discharge pipe), remote control information (operation switching, fan speed switching) are recorded when trouble occurs, so more detailed information can be checked.
Stop data	These are the data which display the reason by a stop occurred when the air conditioning system performed protective stops, etc. in the past. Even if stop data alone are generated, the system restarts automatically. (After executing the stop mode while the display is normal, the system restarts automatically.) Data for up to 10 previous occasions are stored. Data older than the 10th previous occasion are erased. (Important) In cases where transient stop data only are generated, the air conditioner system may still be normal. However, if the same protective stop occurs frequently (3 or more times), it could lead to customer complaints.

(b) Service mode display procedure


Start
Turn off the air conditioner's power once, then wait 1 minute or longer.
Turn the air conditioner's power on again while pressing the unit ON/OFF button.
NO (*1)
Did a buzzer located in the indoor unit sound?
YES
Within 1 minute after turning the air conditioner's power on, signals will be sent from the remote control (*2)
Count the number of times the RUN light and TIMER light flash (*3), and check the contents of the error, etc. from the table. (See page 41.)
Are other data displayed?
NO
YES
Change the remote control settings based on the instructions in the table (*4). (See page 39.)
*1: If the buzzer does not sound no matter how many times you repeat the operation, the unit ON/OFF button may be faulty.
*2: Set the remote control's settings on "Cooling operation," "Fan speed: MED" and "Set temperature: 21ºC."
Turn off the air conditioner's power to terminate the service mode. If you are going to turn the power on again, wait 1 minute or longer after turning it off.

*3: To count the number of flashes in the service mode, count the number of flashes after the light lights up for 1.5 second initially (start signal). (The time that the light lights up for 1.5 second (start signal) is not counted in the number of flashes.)


• In the case of current cut (example: stop code "42")
The RUN light (10's digit) flashes 4 times and the TIMER light (1's digit) flashes 2 times.
4 × 10 + 2 × 1 = 42 → From the table, read the instructions for error code 42, "current cut".
1.5 sec.
RUN light
(10's digit)
ON
OFF
0.5 sec.
0.5 sec.
TIMER light
(1's digit)
ON
OFF
11-second interval

*4: When in the service mode, when the remote control settings (operation switching, fan speed switching, temperature setting) are set as shown in the following table and sent to the air conditioner unit, the unit switches to display of service data.

① **Self-diagnosis data**

What are Self-diagnosis Data? ..... These are control data (reasons for stops, temperature at each sensor, remote control information) from the time when there were error displays (abnormal stops) in the indoor unit in the past.

Data from up to 5 previous occasions are stored in memory. Data older than the 5th previous occasion are erased.

The temperature setting indicates how many occasions previous to the present setting the error display data are and the operation switching and fan speed switching data show the type of data.

Remote control setting		Contents of output data
Operation switching	Fan speed switching	
Cooling	MED	Displays the reason for stopping display in the past (error code).
	HI	Displays the room temperature sensor temperature at the time the error code was displayed in the past.
	AUTO	Displays the indoor heat exchanger sensor temperature at the time the error code was displayed in the past.
Fan	LO	Displays the remote control information at the time the error code was displayed in the past.
	MED	Displays the outdoor air temperature sensor temperature at the time the error code was displayed in the past.
	HI	Displays the outdoor heat exchanger sensor temperature at the time the error code was displayed in the past.
	AUTO	Displays the discharge pipe sensor temperature at the time the error code was displayed in the past.

Remote control setting	Indicates the number of occasions previous to the present the error display data are from.
Temperature setting	
21ºC	1 time previous (previous time)
22ºC	2 times previous
23ºC	3 times previous
24ºC	4 times previous
25ºC	5 times previous

(Example)

Remote control setting			Displayed data
Operation switching	Fan speed switching	Temperature setting	
Cooling	MED	21ºC	Displays the reason for the stop (error code) the previous time an error was displayed.
		22ºC	Displays the reason for the stop (error code) 2 times previous when an error was displayed.
		23ºC	Displays the reason for the stop (error code) 3 times previous when an error was displayed.
		24ºC	Displays the reason for the stop (error code) 4 times previous when an error was displayed.
		25ºC	Displays the reason for the stop (error code) 5 times previous when an error was displayed.

② **Stop data**

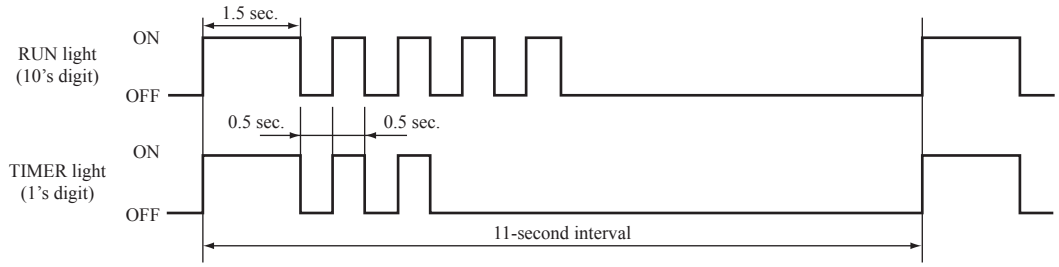
Remote control setting			Displayed data
Operation switching	**Fan speed switching**	**Temperature setting**	
Cooling	LO	21ºC	Displays the reason for the stop (stop code) the previous time when the air conditioner was stopped by protective stop control.
		22ºC	Displays the reason for the stop (stop code) 2 times previous when the air conditioner was stopped by protective stop control.
		23ºC	Displays the reason for the stop (stop code) 3 times previous when the air conditioner was stopped by protective stop control.
		24ºC	Displays the reason for the stop (stop code) 4 times previous when the air conditioner was stopped by protective stop control.
		25ºC	Displays the reason for the stop (stop code) 5 times previous when the air conditioner was stopped by protective stop control.
		26ºC	Displays the reason for the stop (stop code) 6 times previous when the air conditioner was stopped by protective stop control.
		27ºC	Displays the reason for the stop (stop code) 7 times previous when the air conditioner was stopped by protective stop control.
		28ºC	Displays the reason for the stop (stop code) 8 times previous when the air conditioner was stopped by protective stop control.
		29ºC	Displays the reason for the stop (stop code) 9 times previous when the air conditioner was stopped by protective stop control.
		30ºC	Displays the reason for the stop (stop code) 10 times previous when the air conditioner was stopped by protective stop control.

(c) Error code, stop code table (Assignment of error codes and stop codes is done in common for all models.)

Number of flashes when in service mode		Stop code or Error code	Error content	Cause	Occurrence conditions	Error display	Auto recovery
RUN light (10's digit)	TIMER light (1's digit)						
OFF	OFF	0	Normal	—	—	—	—
	5 - time flash	05	Can not receive signals for 35 seconds (if communications have recovered)	Power supply is faulty. Power supply cables and signal lines are improperly wired. Indoor or outdoor PCB are faulty.	When 35 seconds passes without communications signals from either the outdoor unit or the indoor unit being detected correctly.	○	—
3 - time flash	5 - time flash	35	Cooling high pressure control	Cooling overload operation. Outdoor unit fan speed drops. Outdoor heat exchanger sensor is short circuit.	When the outdoor heat exchanger sensor's value exceeds the set value.	○ (5 times)	○
	6 - time flash	36	Compressor overheat 110°C	Refrigerant is insufficient. Discharge pipe sensor is faulty. Service valve is closed.	When the discharge pipe sensor's value exceeds the set value.	○ (2 times)	○
	7 - time flash	37	Outdoor heat exchanger sensor is abnormal	Outdoor heat exchanger sensor wire is disconnected. Connector connections are poor. Outdoor PCB is faulty.	–55°C or lower is detected for 5 seconds continuously 3 times within 40 minutes after intial detection of this anomalous temperature. Or–55°C or lower is detected for 5 seconds continuously within 20 seconds after power ON.	○ (3 times)	○
	8 - time flash	38	Outdoor air temperature sensor is abnormal	Outdoor air temperature sensor wire is disconnected. Connector connections are poor. Outdoor PCB is faulty.	–55°C or lower is detected for 5 seconds continuously 3 times within 40 minutes after intial detection of this anomalous temperature. Or–55°C or lower is detected for 5 seconds continuously within 20 seconds after power ON.	○ (3 times)	○
	9 - time flash	39	Discharge pipe sensor is abnormal (anomalous stop)	Discharge pipe sensor wire is disconnected. Connector connections are poor. Outdoor PCB is faulty.	–25°C or lower is detected for 5 seconds continuously 3 times within 40 minutes after intial detection of this anomalous temperature.	○ (3 times)	○
4 - time flash	2 - time flash	42	Current cut	Compressor lock. Compressor wiring short circuit. Compressor output is open phase. Outdoor PCB is faulty. Service valve is closed. Electronic expansion valve is faulty. Compressor is faulty.	Compressor start fails 42 times in succession and the reason for the final failure is current cut.	○ (2 times)	○
	7 - time flash	47	Active filter voltage error	Defective active filter	When the wrong voltage connected for the power supply. When the outdoor PCB is faulty.	○	—
	8 - time flash	48	Outdoor unit's fan motor is abnormal	Outdoor fan motor is faulty. Connector connections are poor. Outdoor PCB is faulty.	When a fan speed of 75 min^{-1} or lower continues for 30 seconds or longer.	○ (3 times)	○
5 - time flash	1 - time flash	51	Short circuit in the power transistor (high side) Current cut circuit breakdown	Outdoor PCB is faulty. Power transistor is damaged.	When it is judged that the power transistor was damaged at the time the compressor started.	○	—
	7 - time flash	57	Refrigeration cycle system protective control	Service valve is closed. Refrigerant is insufficient.	When refrigeration cycle system protective control operates.	○ (3 times)	○
	8 - time flash	58	Current safe	Refrigerant is overcharge. Compressor lock. Overload operation.	When there is a current safe stop during operation.	—	○
	9 - time flash	59	Compressor wiring is unconnection Voltage drop Low speed protective control	Compressor wiring is disconnected. Power transistor is damaged. Power supply construction is defective. Outdoor PCB is faulty. Compressor is faulty.	When the current is 1A or less at the time the compressor started. When the power supply voltage drops during operation. When the compressor command speed is 1ower than 32 rps for 60 minutes.	○	○
6 - time flash	OFF	60	Rotor lock	Compressor is faulty. Compressor output is open phase. Electronic expansion valve is faulty. Overload operation. Outdoor PCB is faulty.	After the compressor starts, when the compressor stops due to rotor lock.	○ (2 times)	○
	1 - time flash	61	Connection lines between the indoor and outdoor units are faulty	Connection lines are faulty. Indoor or outdoor PCB are faulty.	When 10 seconds passes after the power is turned on without communications signals from the indoor or outdoor unit being detected correctly.	○	—
	2 - time flash	62	Serial transmission error	Indoor or outdoor PCB are faulty. Noise is causing faulty operation.	When 7 minute 35 seconds passes without communications signals from either the outdoor unit or the indoor unit being detected correctly.	○	—
8 - time flash	OFF	80	Indoor unit's fan motor is abnormal	Indoor fan motor is faulty. Connector connections are poor. Indoor PCB is faulty.	When the indoor unit's fan motor is detected to be running at 300 min^{-1} or lower speed with the fan motor in the ON condition while the air conditioner is running.	○	—
	2 - time flash	82	Indoor heat exchanger sensor is abnormal (anomalous stop)	Indoor heat exchanger sensor wire is disconnected. Connector connections are poor.	When a temperature of –28°C or lower is sensed continuously for 40 minutes during heating operation. (the compressor stops).	○	—
	4 - time flash	84	Anti-condensation control	High humidity condition. Humidity sensor is faulty.	Anti-condensation prevention control is operating.	—	○
	5 - time flash	85	Anti-frost control	Indoor unit fan speed drops. Indoor heat exchanger sensor is broken wire.	When the anti-frost control operates and the compressor stops during cooling operation.	—	○
	6 - time flash	86	Heating high pressure control	Heating overload operation. Indoor unit fan speed drops. Indoor heat exchanger sensor is short circuit.	When high pressure control operates during heating operation and the compressor stops.	—	○

Note (1) The number of flashes when in the Service Mode do not include the 1.5 second period when the lights light up at first (start signal). (See the example shown below.)

• In the case of current cut (example: stop code "42")
The RUN light (10's digit) flashes 4 times and the TIMER light (1's digit) flashes 2 times.
$4 \times 10 + 2 \times 1 = 42 \rightarrow$ From the table, read the instructions for error code 42, "Current cut".



(2) Abnormal Stop: – Is not displayed. (automatic recovery only)
◯Displayed.
If there is a ( ) displayed, the error display shows the number of times that an automatic recovery occurred for the same reason has reached the number of times in ( ).
If no ( ) is displayed, the error display shows that the trouble has occurred once.

(3) Automatic Recovery: – Does not occur
◯Automatic recovery occurs.

(d) Remote control information tables

1) Operation switching

Display pattern when in service mode RUN light (Operation switching)	Operation switching when there is an abnormal stop
0	AUTO
1	DRY
2	COOL
3	FAN
4	HEAT

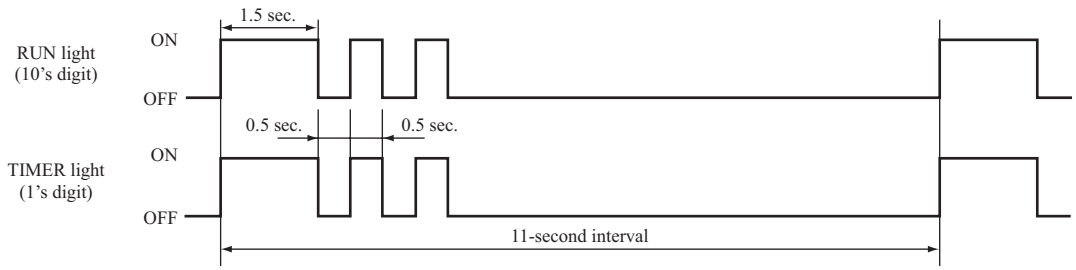
2) Fan speed switching

Display pattern when in service mode TIMER light (Fan speed switching)	Fan speed switching when there is an abnormal stop
0	AUTO
2	HI
3	MED
4	LO
6	HI POWER
7	ECONO

* If no data are recorded (error code is normal), the information display in the remote control becomes as follows.

Remote control setting	Display when error code is normal.
Operation switching	AUTO
Fan speed switching	AUTO

(Example): Operation switching, fan speed switching, cooling HI



(e) Room temperature sensor temperature, indoor heat exchanger sensor temperature, outdoor air temperature sensor temperature, outdoor heat exchanger sensor temperature table

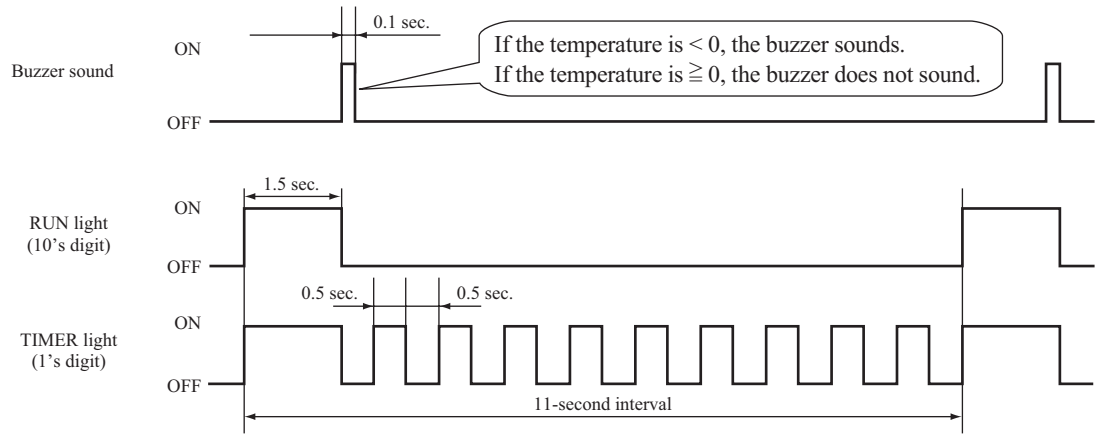
Unit: ºC

Buzzer sound	RUN light (10's digit) \ TIMER light (1's digit)	0	1	2	3	4	5	6	7	8	9
Yes (sounds for 0.1 second)	6	-60	-61	-62	-63	-64					
	5	-50	-51	-52	-53	-54	-55	-56	-57	-58	-59
	4	-40	-41	-42	-43	-44	-45	-46	-47	-48	-49
	3	-30	-31	-32	-33	-34	-35	-36	-37	-38	-39
	2	-20	-21	-22	-23	-24	-25	-26	-27	-28	-29
	1	-10	-11	-12	-13	-14	-15	-16	-17	-18	-19
	0		-1	-2	-3	-4	-5	-6	-7	-8	-9
No (does not sound)	0	0	1	2	3	4	5	6	7	8	9
	1	10	11	12	13	14	15	16	17	18	19
	2	20	21	22	23	24	25	26	27	28	29
	3	30	31	32	33	34	35	36	37	38	39
	4	40	41	42	43	44	45	46	47	48	49
	5	50	51	52	53	54	55	56	57	58	59
	6	60	61	62	63	64	65	66	67	68	69
	7	70	71	72	73	74	75	76	77	78	79
	8	80	81	82	83	84	85	86	87	88	89
	9	90	91	92	93	94	95	96	97	98	99

* If no data are recorded (error code is normal), the display for each sensor becomes as shown below.

Sensor name	Sensor value displayed when the error code is normal
Room temperature sensor temperature	-19ºC
Indoor heat exchanger sensor temperature	-64ºC
Outdoor air temperature sensor temperature	-64ºC
Outdoor heat exchanger sensor temperature	-64ºC

(Example) Room temperature, indoor heat exchanger, outdoor air temperature, outdoor heat exchanger: "-9ºC"



(f) Discharge pipe temperature table

Unit: ºC

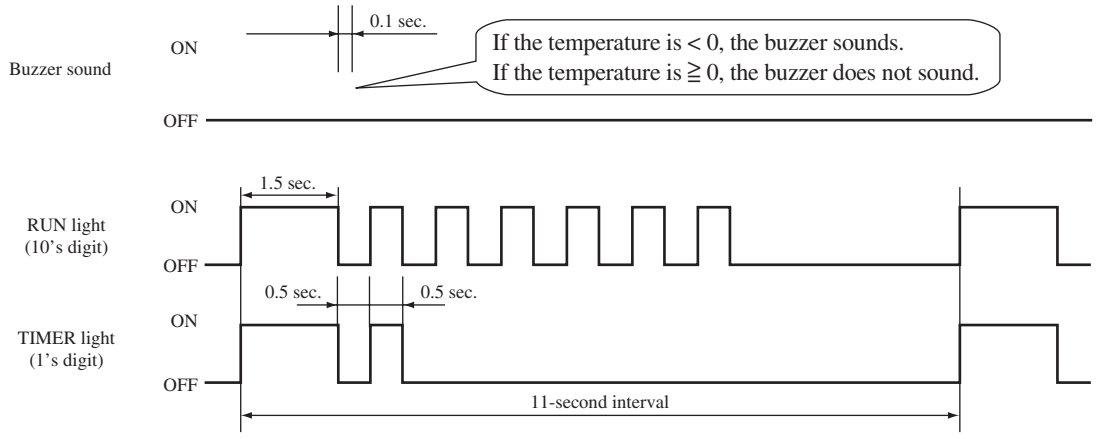
Buzzer sound	RUN light (10's digit) \ TIMER light (1's digit)	0	1	2	3	4	5	6	7	8	9
Yes (sounds for 0.1 second)	3	-60	-62	-64							
	2	-40	-42	-44	-46	-48	-50	-52	-54	-56	-58
	1	-20	-22	-24	-26	-28	-30	-32	-34	-36	-38
	0		-2	-4	-6	-8	-10	-12	-14	-16	-18
No (does not sound)	0	0	2	4	6	8	10	12	14	16	18
	1	20	22	24	26	28	30	32	34	36	38
	2	40	42	44	46	48	50	52	54	56	58
	3	60	62	64	66	68	70	72	74	76	78
	4	80	82	84	86	88	90	92	94	96	98
	5	100	102	104	106	108	110	112	114	116	118
	6	120	122	124	126	128	130	132	134	136	138
	7	140	142	144	146	148	150				

* If no data is recorded (error code is normal), the display for sensor becomes as shown below.

Sensor name	Sensor value displayed when the error code is normal
Discharge pipe sensor temperature	-64ºC

(Example) Discharge pipe temperature: "122ºC"

* In the case of discharge pipe data, multiply the reading value by 2. (Below, 61 x 2 = "122ºC")



Service data record form

Customer		Model	
Date of investigation			
Machine name			
Content of complaint			

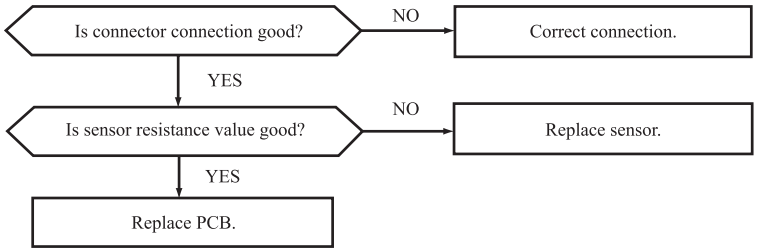
Remote control settings			Content of displayed data	Display results			Display content
Temperature setting	Operation switching	Fan speed switching		Buzzer (Yes/No.)	RUN light (Times)	TIMER light (Times)	
21	Cooling	MED	Error code on previous occasion.				
		HI	Room temperature sensor temperature on previous occasion.				
		AUTO	Indoor heat exchanger sensor temperature on previous occasion.				
	Fan	LO	Remote control information on previous occasion.				
		MED	Outdoor air temperature sensor temperature on previous occasion.				
		HI	Outdoor heat exchanger sensor temperature on previous occasion.				
		AUTO	Discharge pipe sensor temperature on previous occasion.				
22	Cooling	MED	Error code on second previous occasion.				
		HI	Room temperature sensor temperature on second previous occasion.				
		AUTO	Indoor heat exchanger sensor temperature on second previous occasion.				
	Fan	LO	Remote control information on second previous occasion.				
		MED	Outdoor air temperature sensor temperature on second previous occasion.				
		HI	Outdoor heat exchanger sensor temperature on second previous occasion.				
		AUTO	Discharge pipe sensor temperature on second previous occasion.				
23	Cooling	MED	Error code on third previous occasion.				
		HI	Room temperature sensor temperature on third previous occasion.				
		AUTO	Indoor heat exchanger sensor temperature on third previous occasion.				
	Fan	LO	Remote control information on third previous occasion.				
		MED	Outdoor air temperature sensor temperature on third previous occasion.				
		HI	Outdoor heat exchanger sensor temperature on third previous occasion.				
		AUTO	Discharge pipe sensor temperature on third previous occasion.				
24	Cooling	MED	Error code on fourth previous occasion.				
		HI	Room temperature sensor temperature on fourth previous occasion.				
		AUTO	Indoor heat exchanger sensor temperature on fourth previous occasion.				
	Fan	LO	Remote control information on fourth previous occasion.				
		MED	Outdoor air temperature sensor temperature on fourth previous occasion.				
		HI	Outdoor heat exchanger sensor temperature on fourth previous occasion.				
		AUTO	Discharge pipe sensor temperature on fourth previous occasion.				
25	Cooling	MED	Error code on fifth previous occasion.				
		HI	Room temperature sensor temperature on fifth previous occasion.				
		AUTO	Indoor heat exchanger sensor temperature on fifth previous occasion.				
	Fan	LO	Remote control information on fifth previous occasion.				
		MED	Outdoor air temperature sensor temperature on fifth previous occasion.				
		HI	Outdoor heat exchanger sensor temperature on fifth previous occasion.				
		AUTO	Discharge pipe sensor temperature on fifth previous occasion.				
21	Cooling	LO	Stop code on previous occasion.				
22			Stop code on second previous occasion.				
23			Stop code on third previous occasion.				
24			Stop code on fourth previous occasion.				
25			Stop code on fifth previous occasion.				
26			Stop code on sixth previous occasion.				
27			Stop code on seventh previous occasion.				
28			Stop code on eighth previous occasion.				
29			Stop code on ninth previous occasion.				
30			Stop code on tenth previous occasion.				

Judgment		Examiner	
Remarks			

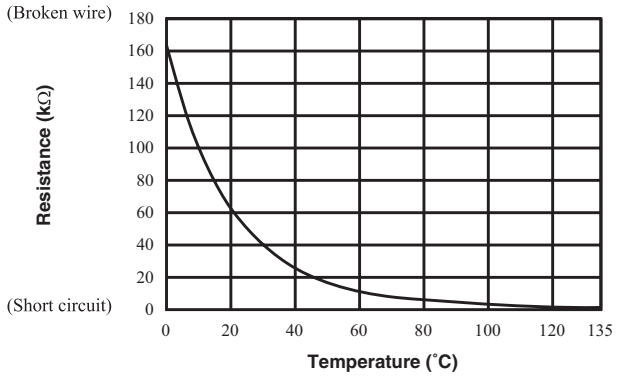
(7) Inspection procedures corresponding to detail of trouble

Sensor error

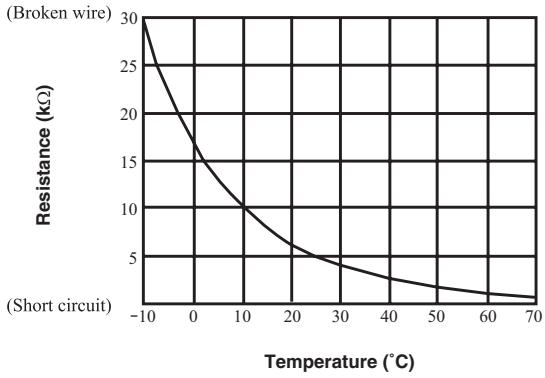
[Broken sensor wire, connector poor connection]



◆ **Discharge pipe sensor temperature characteristics**

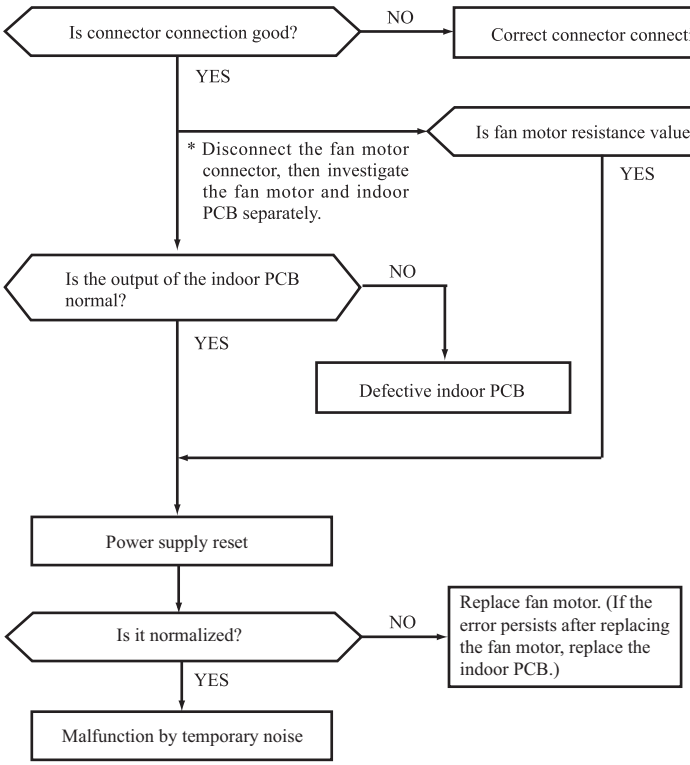


◆ **Sensor temperature characteristics (Room temp., indoor heat exchanger temp., outdoor heat exchanger temp., outdoor air temp.)**



Indoor fan motor error

[Defective fan motor, connector poor connection, defective indoor PCB]

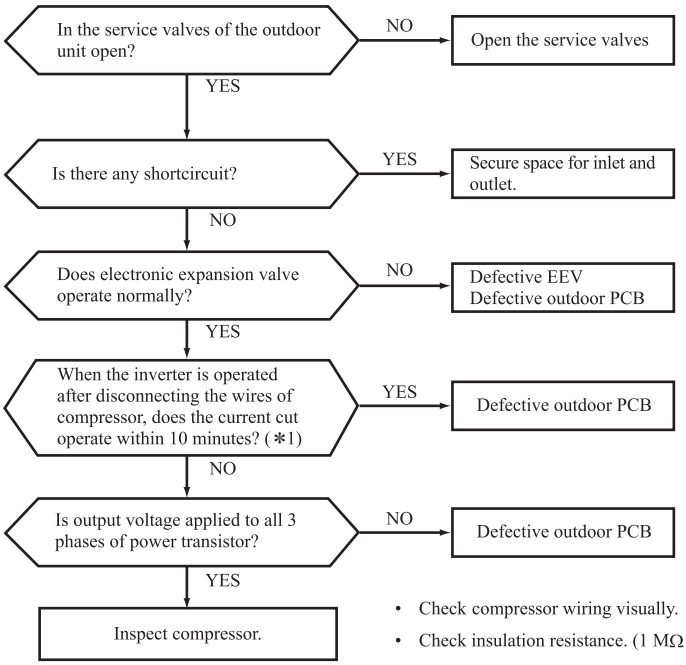

Is connector connection good?
NO
Correct connector connection
YES
* Disconnect the fan motor connector, then investigate the fan motor and indoor PCB separately.
Is fan motor resistance value good?
NO
YES
Replace indoor fan motor
Is the output of the indoor PCB normal?
NO
YES
Defective indoor PCB
Power supply reset
Is it normalized?
NO
Replace fan motor. (If the error persists after replacing the fan motor, replace the indoor PCB.)
YES
Malfunction by temporary noise

Notes (1) See page 51 for the fan motor and indoor PCB check procedure.

(2) After making sure the fan motor and indoor PCB are normal, connect the connectors and confirm that the fan motor is turning.
(If power is turned on while one or the other is broken down, it could cause the other to break down also.)

Current cut

[Compressor lock, Compressor wiring short circuit, Compressor output is open phase, Outdoor PCB is faulty, Service valve is closed, EEV is faulty, Compressor faulty.]



For inspection of electronic expansion valve, see page 54.

∗1 If it is normal, it is the rotor lock problem.

For the output voltage check of power transistor, see page 52.

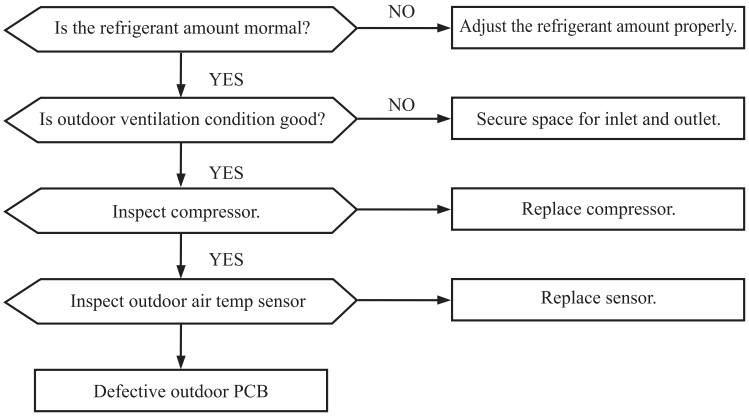
- Check compressor wiring visually.
- Check insulation resistance. (1 MΩ or over)
- Check coil wire resistance.

If check results are normal, compressor is locked.

SRK10, 13 : 4.293Ω (U-V, V-W, U-W) or more at 20ºC
SRK18 : 1.104Ω (U-V, V-W, U-W) or more at 20ºC

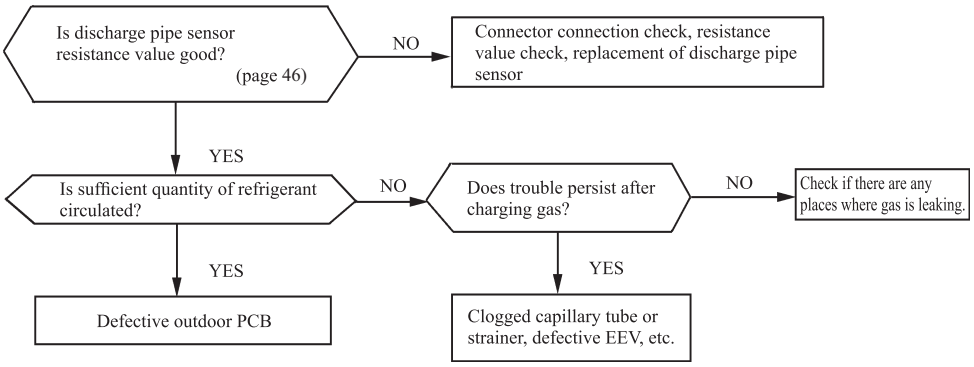
Current safe stop

[Overload operation, compressor lock, overcharge]



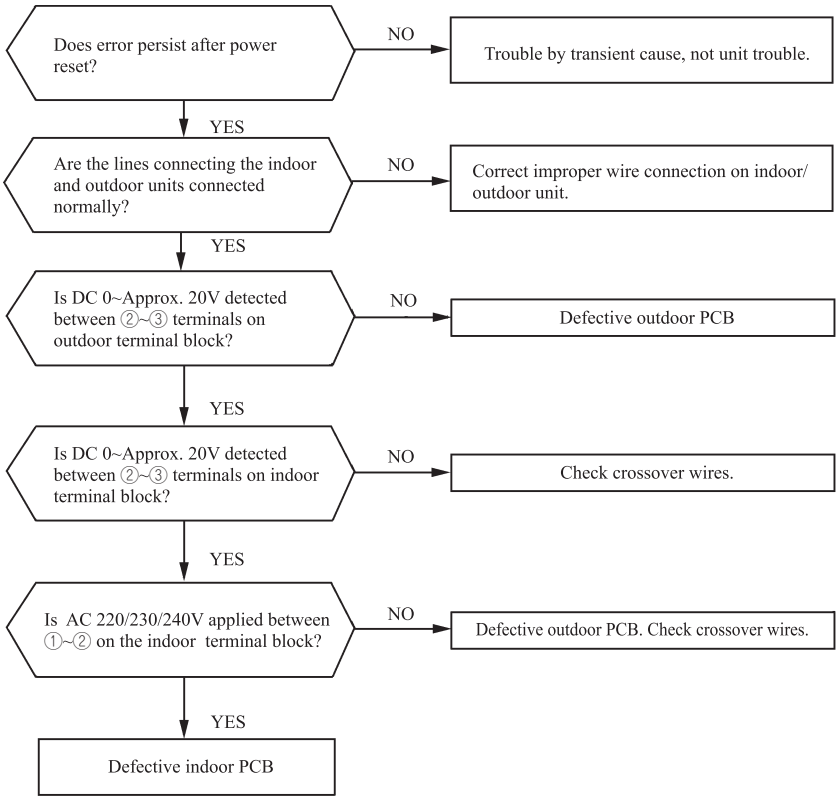
Over heat of compressor

[Gas shortage, defective discharge pipe sensor]


Is discharge pipe sensor resistance value good? (page 46)
NO
Connector connection check, resistance value check, replacement of discharge pipe sensor
YES
Is sufficient quantity of refrigerant circulated?
NO
Does trouble persist after charging gas?
NO
Check if there are any places where gas is leaking.
YES
YES
Defective outdoor PCB
Clogged capillary tube or strainer, defective EEV, etc.

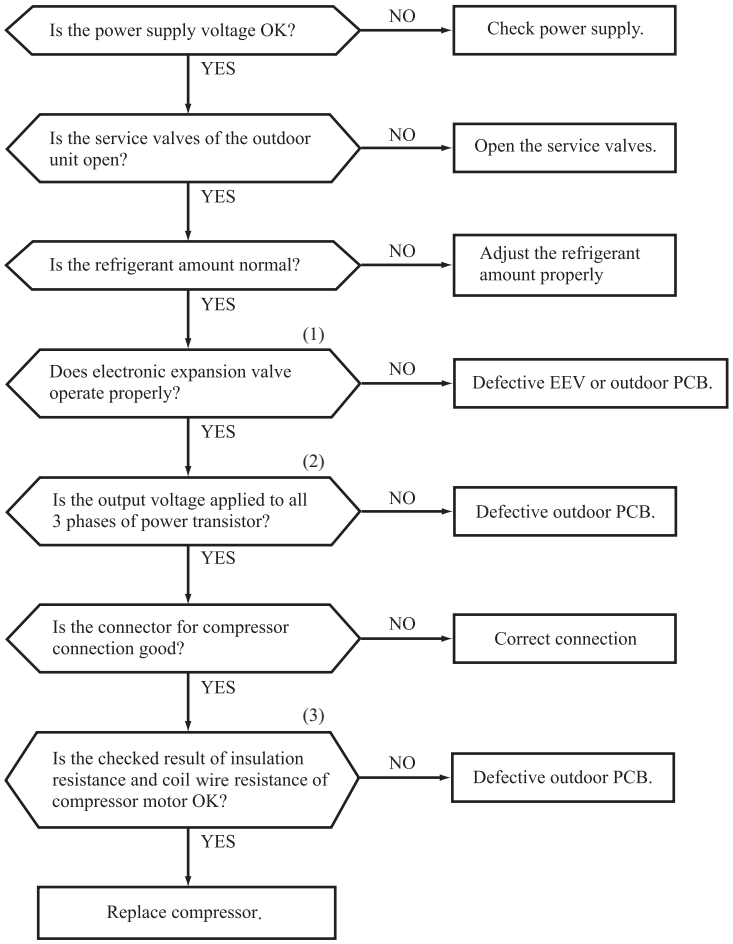
Error of signal transmission

[Wiring error including power cable, defective indoor/outdoor PCB]


Does error persist after power reset?
NO
Trouble by transient cause, not unit trouble.
YES
Are the lines connecting the indoor and outdoor units connected normally?
NO
Correct improper wire connection on indoor/ outdoor unit.
YES
Is DC 0~Approx. 20V detected between ②~③ terminals on outdoor terminal block?
NO
Defective outdoor PCB
YES
Is DC 0~Approx. 20V detected between ②~③ terminals on indoor terminal block?
NO
Check crossover wires.
YES
Is AC 220/230/240V applied between ①~② on the indoor terminal block?
NO
Defective outdoor PCB. Check crossover wires.
YES
Defective indoor PCB

Trouble of outdoor unit

[Insufficient refregerant amount, Faulty power transistor, Broken compressor wire Service valve close, Defective EEV, Defective outdoor PCB]



Proper power supply voltages are as follows.
(At the power supply outlet)
AC 220V : AC 198~242V
AC 230V : AC 207~253V
AC 240V : AC 216~264V

◆ Judgment of refrigerant quantity

(1) Phenomenon of insufficient refrigerant

(a) Loss of capacity

(b) Poor defrosting

(Frost is not removed completely.)

(c) Longer time of hot keep

(5 minute or more)

(Normal time: Approx. 1 – 1 minute and 30 seconds)

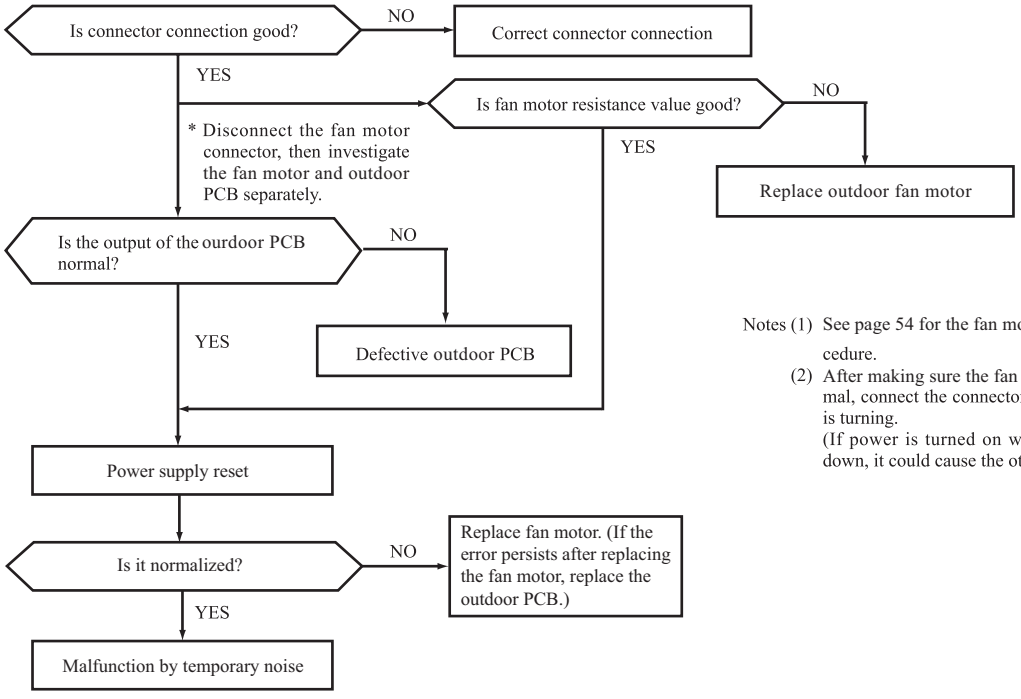
Notes (1) For inspection of electronic expansion valve, see page 54.

(2) For the output voltage check of power transistor, see page 52.

(3) Check coil wire resistance, see page 47.

Outdoor fan motor error

[Defective fan motor, connector poor connection, defective outdoor PCB]

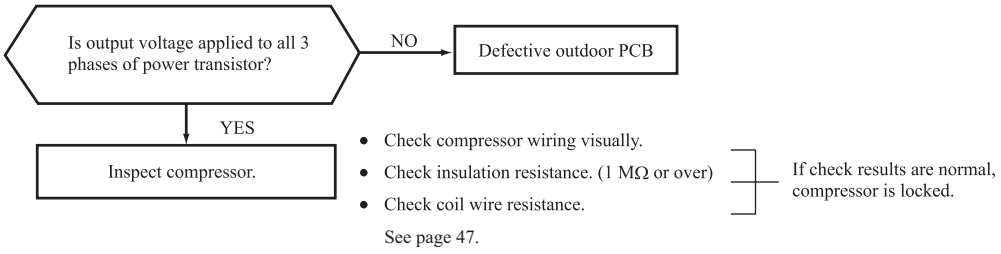

Is connector connection good?
NO
Correct connector connection
YES
Is fan motor resistance value good?
NO
YES
Replace outdoor fan motor
* Disconnect the fan motor connector, then investigate the fan motor and outdoor PCB separately.
Is the output of the ourdoor PCB normal?
NO
YES
Defective outdoor PCB
Power supply reset
Is it normalized?
NO
Replace fan motor. (If the error persists after replacing the fan motor, replace the outdoor PCB.)
YES
Malfunction by temporary noise

Notes (1) See page 54 for the fan motor and outdoor PCB check procedure.

(2) After making sure the fan motor and outdoor PCB are normal, connect the connectors and confirm that the fan motor is turning.
(If power is turned on while one or the other is broken down, it could cause the other to break down also.)

Rotor lock

[Defective compressor, defective outdoor PCB]


Is output voltage applied to all 3 phases of power transistor?
NO
Defective outdoor PCB
YES
Inspect compressor.
• Check compressor wiring visually.
• Check insulation resistance. (1 MΩ or over)
• Check coil wire resistance.
If check results are normal, compressor is locked.
See page 47.

(8) Phenomenon observed after shortcircuit, wire breakage on sensor

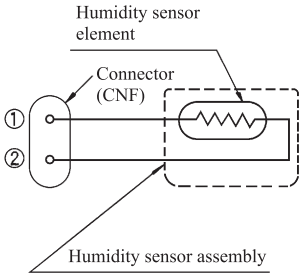
(a) Indoor unit

Sensor	Operation mode	Phenomenon	
		Shortcircuit	Disconnected wire
Room temperature sensor	Cooling	Release of continuous compressor operation command.	Continuous compressor operation command is not released.
Heat exchanger sensor	Cooling	System can be operated normally.	Continiuous compressor operation command is not released. (Anti-frosting)
Humidity sensor	Cooling	Refer to the table below.	Refer to the table below.

■ **Humidity sensor operation**

Failure mode		Control input circuit resding	Air conditioning system operation
Disconnected wire	① Disconnected wire	Humidity reading is 0%	Anti-condensation control is not done.
	② Disconnected wire		
	①② Disconnected wire		
Short Circuit	① and ② are shot circuited	Humidity reading is 100%	Anti-condensation control keep doing.

Remark: Do not perform a continuity check of the humidity sensor with a tester. If DC current is applied, it could damage the sensor.

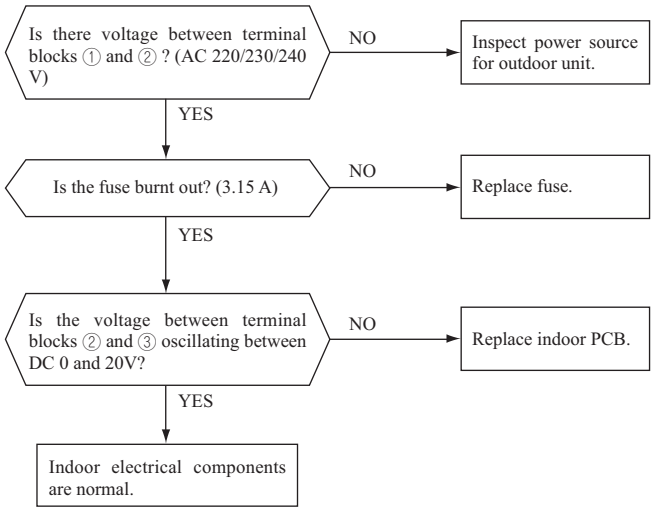


(b) Outdoor unit

Sensor	Operation mode	Phenomenon	
		Shortcircuit	Disconnected wire
Heat exchanger sensor	Cooling	System can be operated normally.	Compressor stop.
Ourdoor air temperature sensor	Cooling	System can be operated normally.	Compressor stop.
Discharge pipe sensor	All modes	Compressor overload protection is disabled. (Can be operated.)	Compressor stop.

(9) Checking the indoor electrical equipment

(a) Indoor PCB check procedure


Is there voltage between terminal blocks ① and ② ? (AC 220/230/240 V)
NO
Inspect power source for outdoor unit.
YES
Is the fuse burnt out? (3.15 A)
NO
Replace fuse.
YES
Is the voltage between terminal blocks ② and ③ oscillating between DC 0 and 20V?
NO
Replace indoor PCB.
YES
Indoor electrical components are normal.

(b) Indoor unit fan motor check procedure

This is a diagnostic procedure for determining if the indoor unit's fan motor or the indoor PCB is broken down.

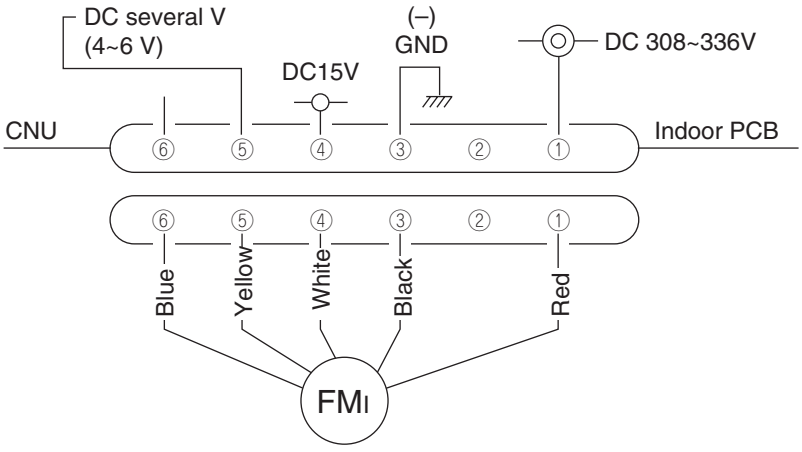
1) Indoor PCB output check

a) Turn off the power.

b) Remove the front panel, then disconnect the fan motor lead wire connector.

c) Turn on the power. If the unit operates when the ON/OFF button is pressed, if trouble is detected after the voltages in the following figure are output for approximately 30 seconds, it means that the indoor PCB is normal and the fan motor is broken down.

If the voltages in the following figure are not output at connector pins No. ①, ④ and ⑤, the indoor PCB has failed and the fan motor is normal.



Measuring point	Resistance when normal
① - ③	DC 308~336V
④ - ③	DC 15V
⑤ - ③	DC several V (4~6V)

2) Fan motor resistance check

Measuring point	Resistance when normal
① - ③ (Red - Black)	20 MΩ or higher
④ - ③ (White - Black)	20 kΩ or higher

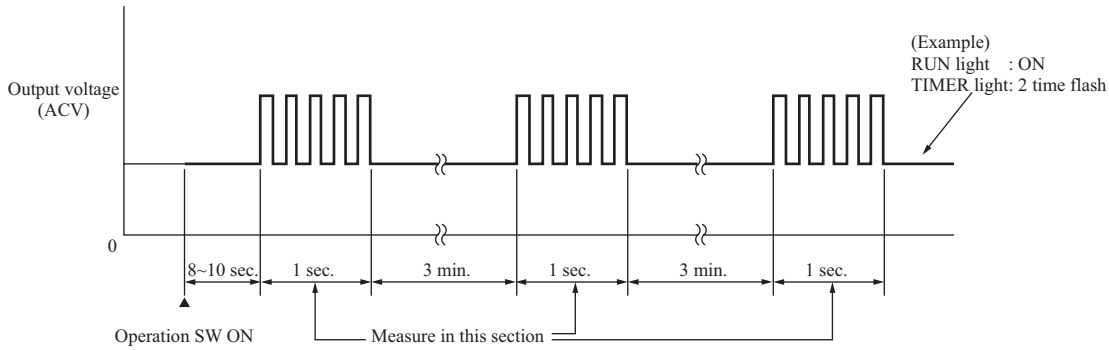
Notes (1) Remove the fan motor and measure it without power connected to it.
(2) If the measured value is below the value when the motor is normal, it means that the fan motor is faulty.

(c) Power transistor inspection procedure

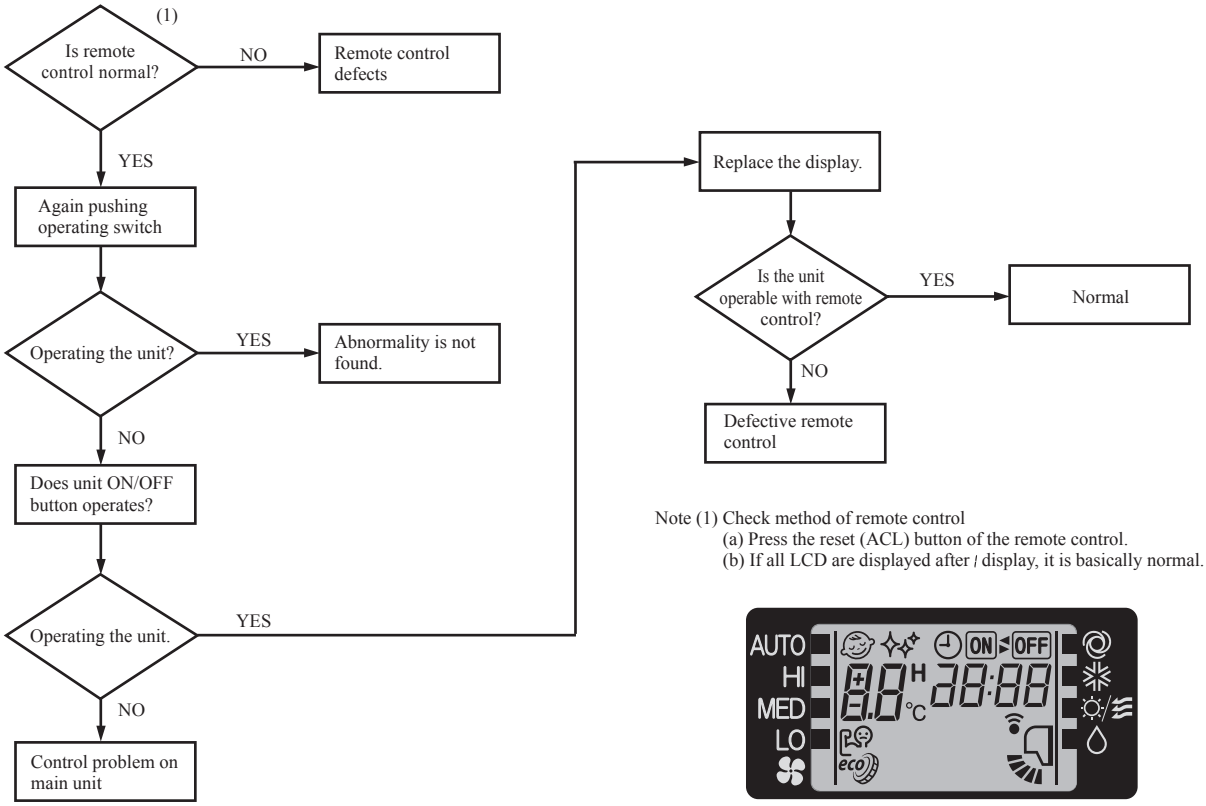
[Use a tester with a needle indicator for the inspection. (Do not use a digital tester. Check in the AC 300 volt range.)]

(1) If there is a self-diagnosis display, inspect the compressor system (burns, wiring mistakes, etc.) If no problems are found, check the output of the power transistor.

(2) Output inspection procedure
Disconnect the terminals for the compresseor.
If an output such as the one shown in the figure on the below can be measured, the power transistor and the circuit board for the outdoor unit are normal.



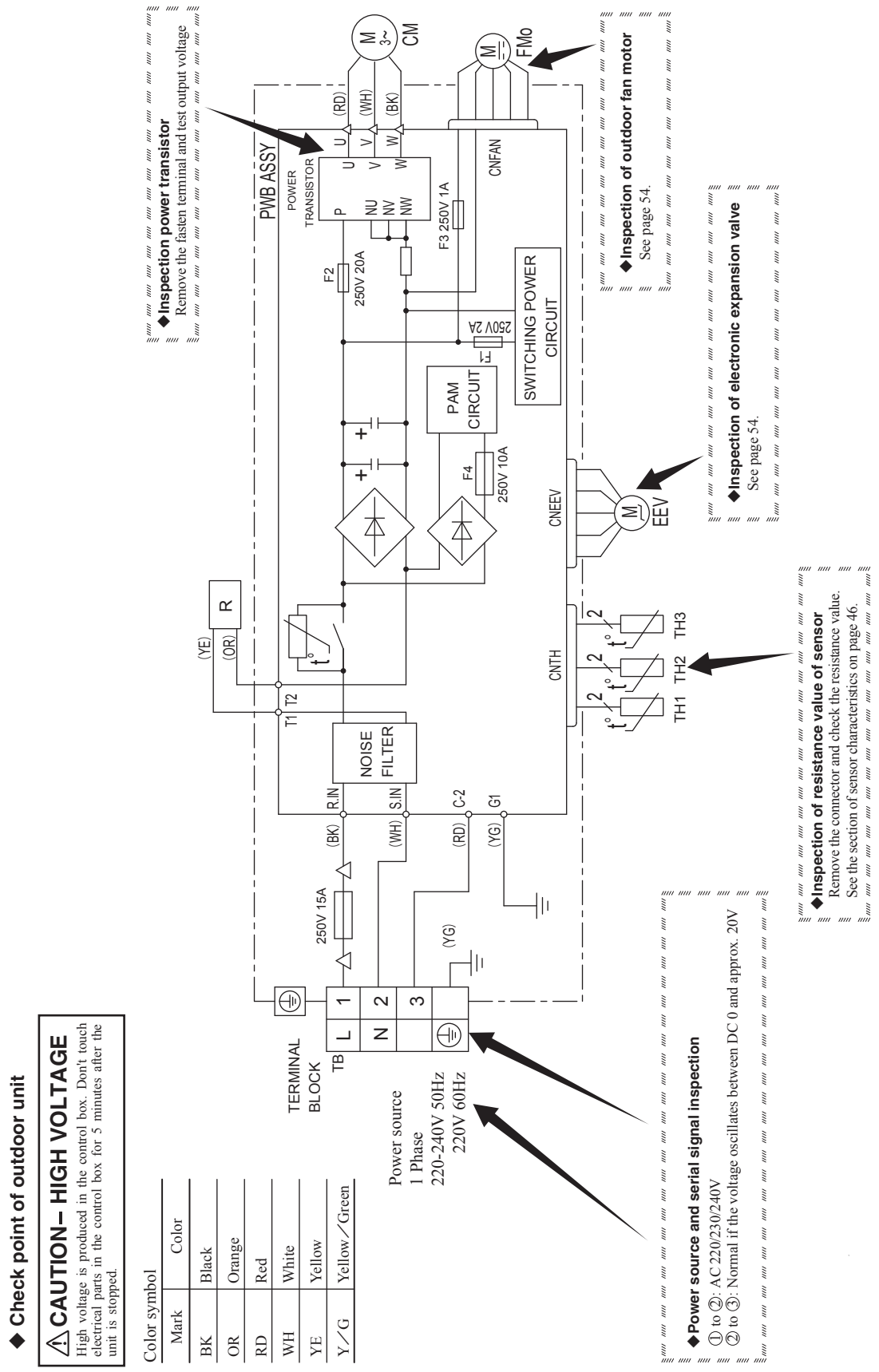
(10) How to make sure of wireless remote control



Note (1) Check method of remote control
(a) Press the reset (ACL) button of the remote control.
(b) If all LCD are displayed after / display, it is basically normal.

(11) Outdoor unit inspection points

Models SRC10YN-S, 13YN-S, 18YN-S

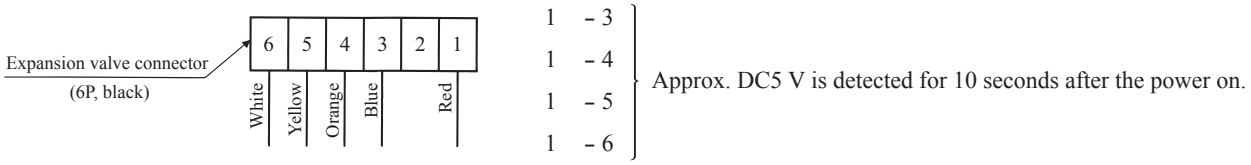


(a) Inspection of electronic expansion valve

Electronic expansion valve operates for approx. 10 seconds after the power on, in order to determine its aperture. Check the operating sound and voltage during the period of time. (Voltage cannot be checked during operation in which only the aperture change occurs.)

(i) If it is heard the sound of operating electronic expansion valve, it is almost normal.

(ii) If the operating sound is not heard, check the output voltage.



(iii) If voltage is detected, the outdoor PCB is normal.

(iv) If the expansion valve does not operate (no operating sound) while voltage is detected, the expansion valve is defective.

• Inspection of electronic expansion valve as a separate unit

Measure the resistance between terminals with an analog tester.

Measuring point	Resistance when normal
1 – 6	46 ± 4Ω (at 20ºC)
1 – 4	
1 – 3	
1 – 5	

(b) Outdoor unit fan motor check procedure

• When the outdoor unit fan motor error is detected, diagnose which of the outdoor unit fan motor or outdoor PCB is defective.

• Diagnose this only after confirming that the indoor unit is normal.

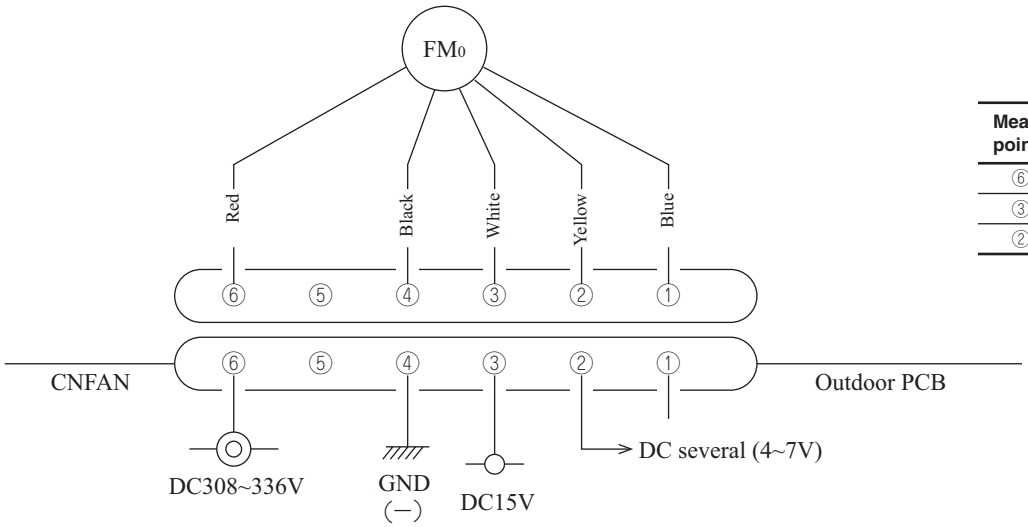
(i) Outdoor PCB output check

1) Turn off the power.

2) Disconnect the outdoor unit fan motor connector CNFAN.

3) When the indoor unit is operated by inserting the power supply plug and pressing (ON) the backup switch for more than 5 seconds, if the voltage of pin No. ② in the following figure is output for 30 seconds at 20 seconds after turning "ON" the backup switch, the outdoor PCB is normal but the fan motor is defective.
If the voltage is not detected, the outdoor PCB is defective but the fan motor is normal.

Note (1) The voltage is output 3 times repeatedly. If it is not detected, the indoor unit displays the error message.



Measuring point	Resistance when normal
⑥ - ④	DC 308~336V
③ - ④	DC 15V
② - ④	DC several V (4~7V)

(ii) Fan motor resistance check

Measuring point	Resistance when normal
⑥ - ④ (Red - Black)	20 MΩ or higher
③ - ④ (White - Black)	20 kΩ or higher

Notes (1) Remove the fan motor and measure it without power connected to it.
(2) If the measured value is below the value when the motor is normal, it means that the fan motor is faulty.

PARTS LIST

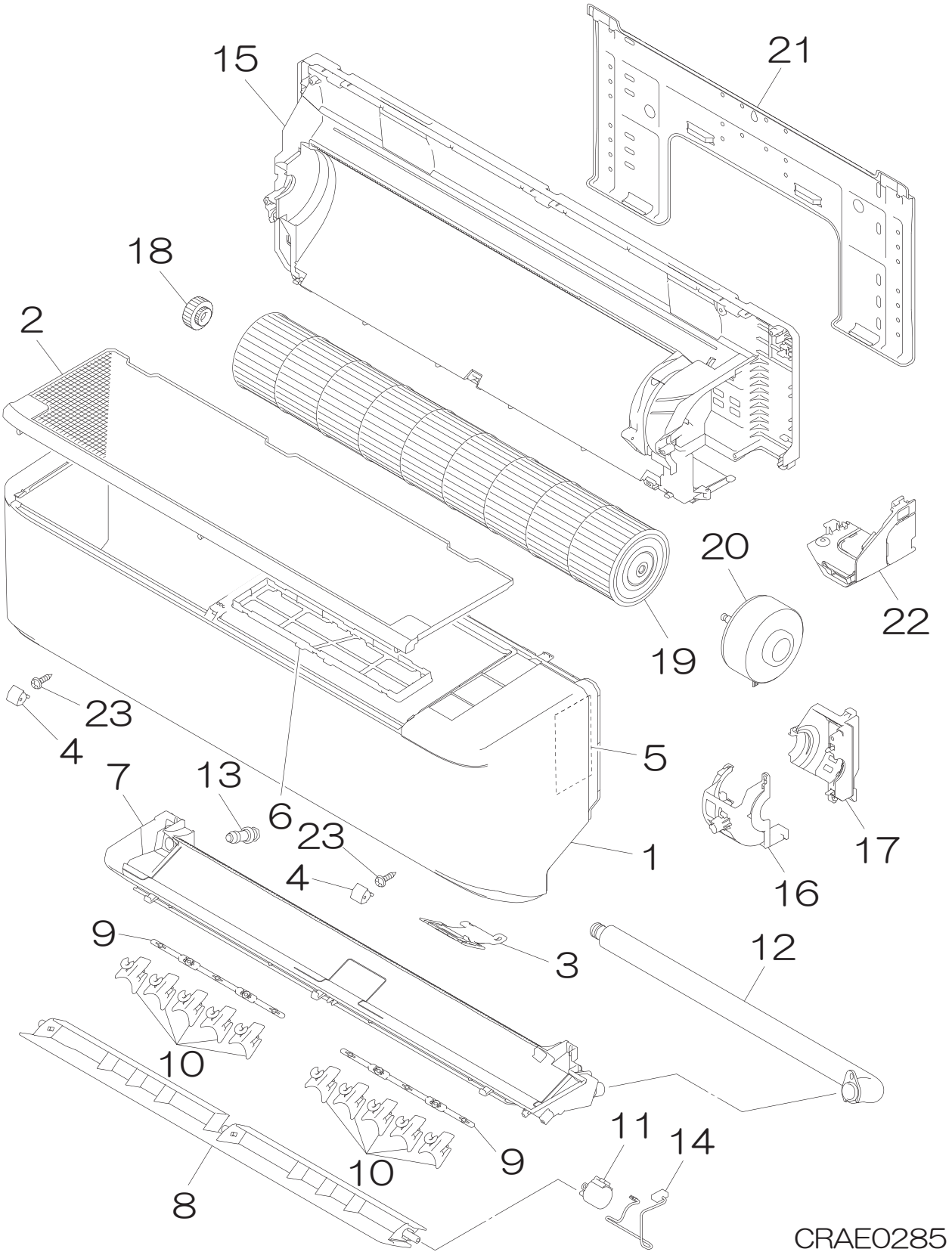
INDOOR UNIT

SRK10YN-S3, -S4, -S5, -S6, -S7
SRK13YN-S3, -S4, -S5, -S6, -S7
SRK18YN-S3, -S4, -S5, -S6, -S7

OUTDOOR UNIT

SRC10YN-S3, -S4, -S5, -S6, -S7
SRC13YN-S3, -S4, -S5, -S6, -S7
SRC18YN-S3, -S4, -S5, -S6, -S7

PANEL & FAN ASSY

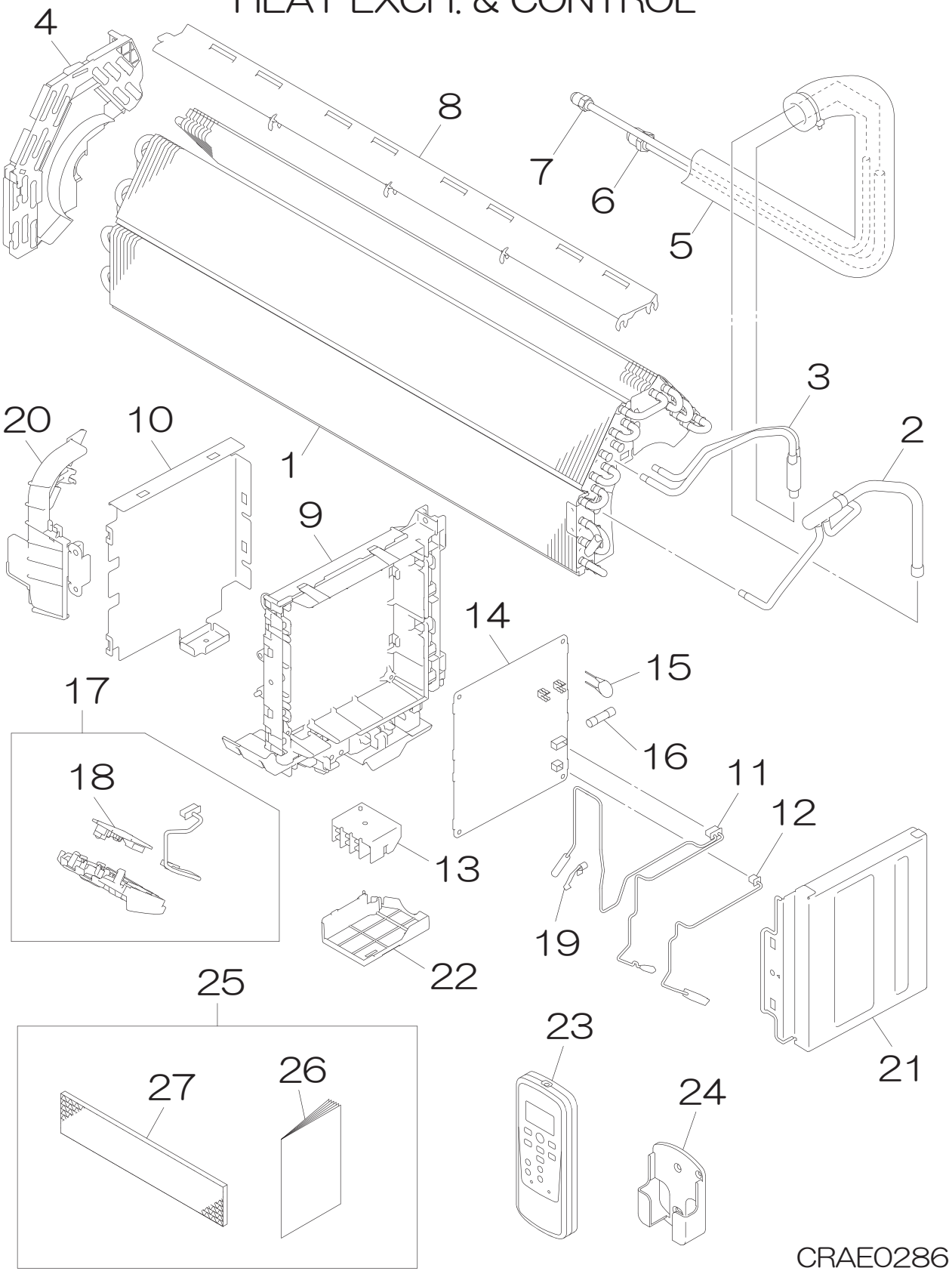


SRK10YN-S3, -S4, -S5, -S6, -S7

END ITEM NO. : RWA002F075AA, 075AB, 075AC, 075AD, 075AF

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～6	RLC 102A 001C	PANEL ASSY	1			1	1	1	2	
1	RLC 122A 002C	PANEL,FRONT	1			1	1	1	2	
2	RLC 437A 001	FILTER,AIR(TOP)	1			2	2	4	7	W623×D183(t14)
3	RLC 133A 002	PLATE,ORNAMENT	1			1	1	1	2	
4	RLA 129A 017	CAP	2			1	1	1	2	
5	RLC 011G 001	LABEL WIRING	1							
6	RLC 129A 008	HOLDER,FILTER	1							
7～14	RLC 435A 001	GRILLE ASSY,AIR OUT	1			1	1	2	3	
7	RLC 435A 002	GRILLE,AIR OUTLET	1			1	1	2	3	
8	RLC 436A 003	FLAP ASSY	1			1	1	2	2	
9・10	RLC 436A 004	LOUVER ASSY	2			1	1	2	2	
9	RLC 129A 009	PLATE,CONNECTING	2			1	1	1	2	
10	RLC 436A 002	LOUVER	10			1	1	2	2	
11	SSA 512T 096	MOTOR,STEPPING	1			1	1	1	2	FOR FLAP
12	SSA 423A 102	HOSE,DRAIN	1							
13	SSA 326A 047	PLUG	1							
14	RKS 504A 100	HARNESS ASSY	1			1	1	1	2	FOR FLAP MOTOR
15	RLC 111A 001	BASE ASSY	1			1	1	1	2	
16	RLC 129A 001	CASE,MOTOR(U)	1			1	1	1	2	
17	RLC 129A 002	CASE,MOTOR(L)	1			1	1	1	2	
18	SSA 923C 114	BEARING,PLANE	1			1	1	1	2	
19	SSA 431G 051	IMPELLER	1			1	1	2	4	
20	SSA 512T 127B	MOTOR,DC	1			1	1	1	2	FOR IMPELLER
21	RLC 032A 001	PLATE,INSTALLATION	1			1	1	1	2	
22	RLC 132A 001	LID	1			1	1	2	4	
23	SSA 913A 007	SCREW,TAP	2							4×14

HEAT EXCH. & CONTROL

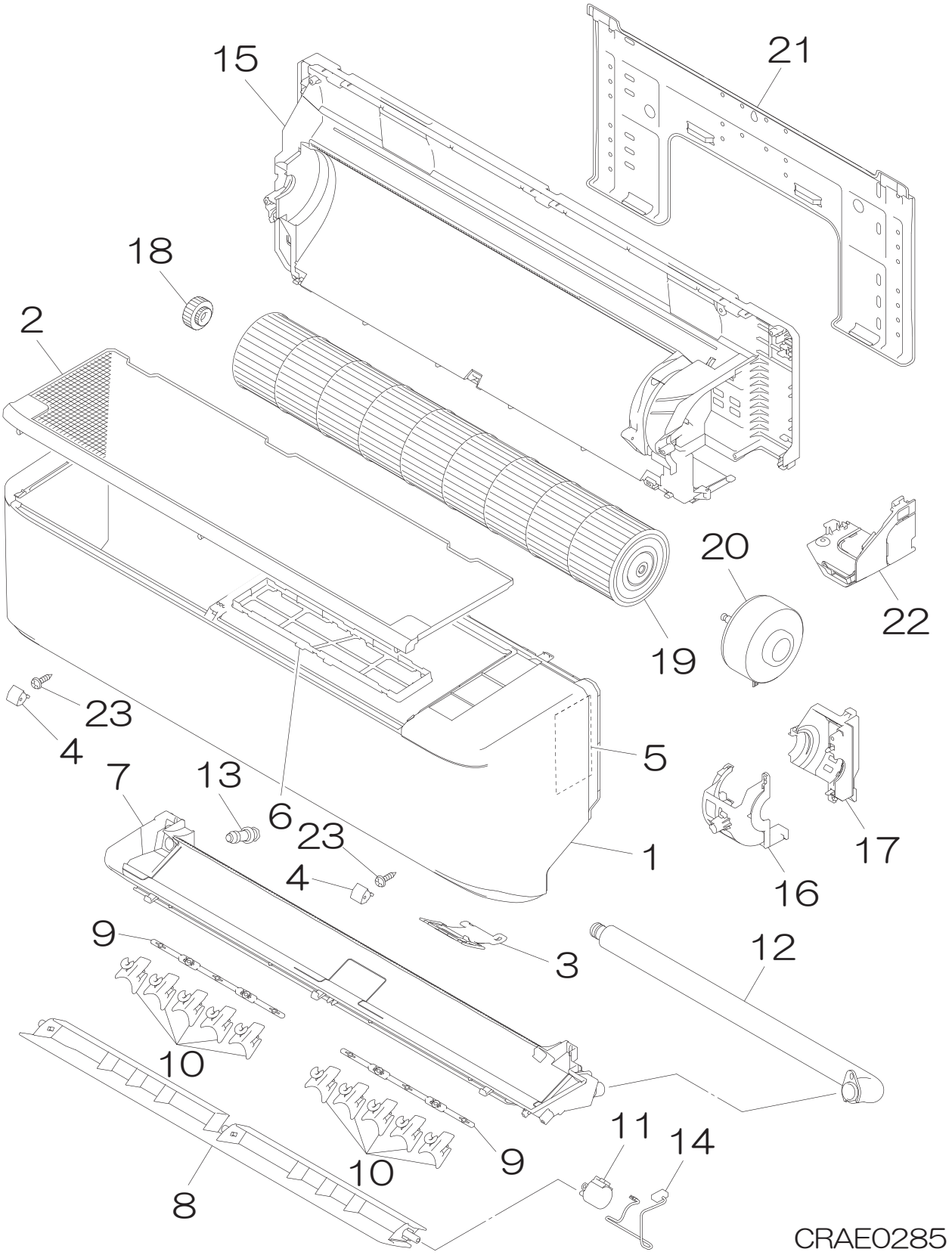


SRK10YN-S3, -S4, -S5, -S6, -S7

END ITEM NO. : RWA002F075AA, 075AB, 075AC, 075AD, 075AF

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～8	RLC 301A 001A	HEAT EXCH ASSY(AIR)	1			1	1	1	2	
2	RLC 315D 003	HEADER ASSY	1							
3	RLC 321A 038	PIPE ASSY(LIQUID)	1							
4	RLC 129A 003	BRACKET(L)	1			1	1	1	2	
5～7	RLC 321A 041	PIPE ASSY	1							
6	SSA 323F 088	UNION(SLD)	1							FOR GAS
7	SSA 323F 088A	UNION(SLD)	1							FOR LIQ.
8	RLC 129A 004	PLATE,BAFFLE	1							
9・10	RLC 142A 003	BOX ASSY,CONTROL	1							
9	RLC 142A 004	BOX ASSY,CONTROL	1							
10	RLC 132A 002	COVER,CONTROL	1							
11	SSA 551A 163L	SENSOR ASSY	1			1	1	2	4	INCL.SENSOR
12	SSA 551B 018	SENSOR(HUMIDITY)	1			1	1	2	4	
13	SSA 561B 702B	BLOCK,TERMINAL	1			1	1	2	2	T
14～16	RLC 505A 001C	PWB ASSY	1			2	2	4	8	
15	SSA 555B 050C	VARISTOR	1			1	1	1	2	Z
16	SSA 564A 132	FUSE(CURRENT)	1			1	1	1	2	F 3A
17	RLC 503A 001	DISPLAY ASSY	1			1	1	2	4	
18	RLC 505A 003	PWB ASSY(DISPLAY)	1			2	2	4	8	
19	RKJ 941F 001A	SPRING,LEAF	1							
20	RLC 129A 010	COVER,BEND	1							
21	RLC 142A 002	LID,CONTROL	1							
22	RLA 129A 023	COVER ASSY(TB)	1							
23	RKX 502A 001B	CONTROL ASSY,REMOTE	1			2	3	5	10	
24	RKN 032A 002C	HOLDER(REMO-CON)	1			1	1	1	2	
25	RLC 008A 002B	PARTS,STANDARD	1							FOR S3, S4, S5, S7
25	RLC 008A 002C	PARTS,STANDARD	1							FOR S6
26	RLC 012A 006A	MANUAL,INSTRUCTION	1							FOR S3, S4, S5, S7
26	RLC 012A 006	MANUAL,INSTRUCTION	1							FOR S6
27	RKT 437A 005	FILTER,LIGHT CLEAN	1							
(28)	RLC 011F 002AA	LABEL,MODEL NAME	1							FOR S3
(28)	RLC 011F 002AB	LABEL,MODEL NAME	1							FOR S4
(28)	RLC 011F 002AC	LABEL,MODEL NAME	1							FOR S5
(28)	RLC 011F 002AD	LABEL,MODEL NAME	1							FOR S6
(28)	RLC 011F 002AF	LABEL,MODEL NAME	1							FOR S7

PANEL & FAN ASSY

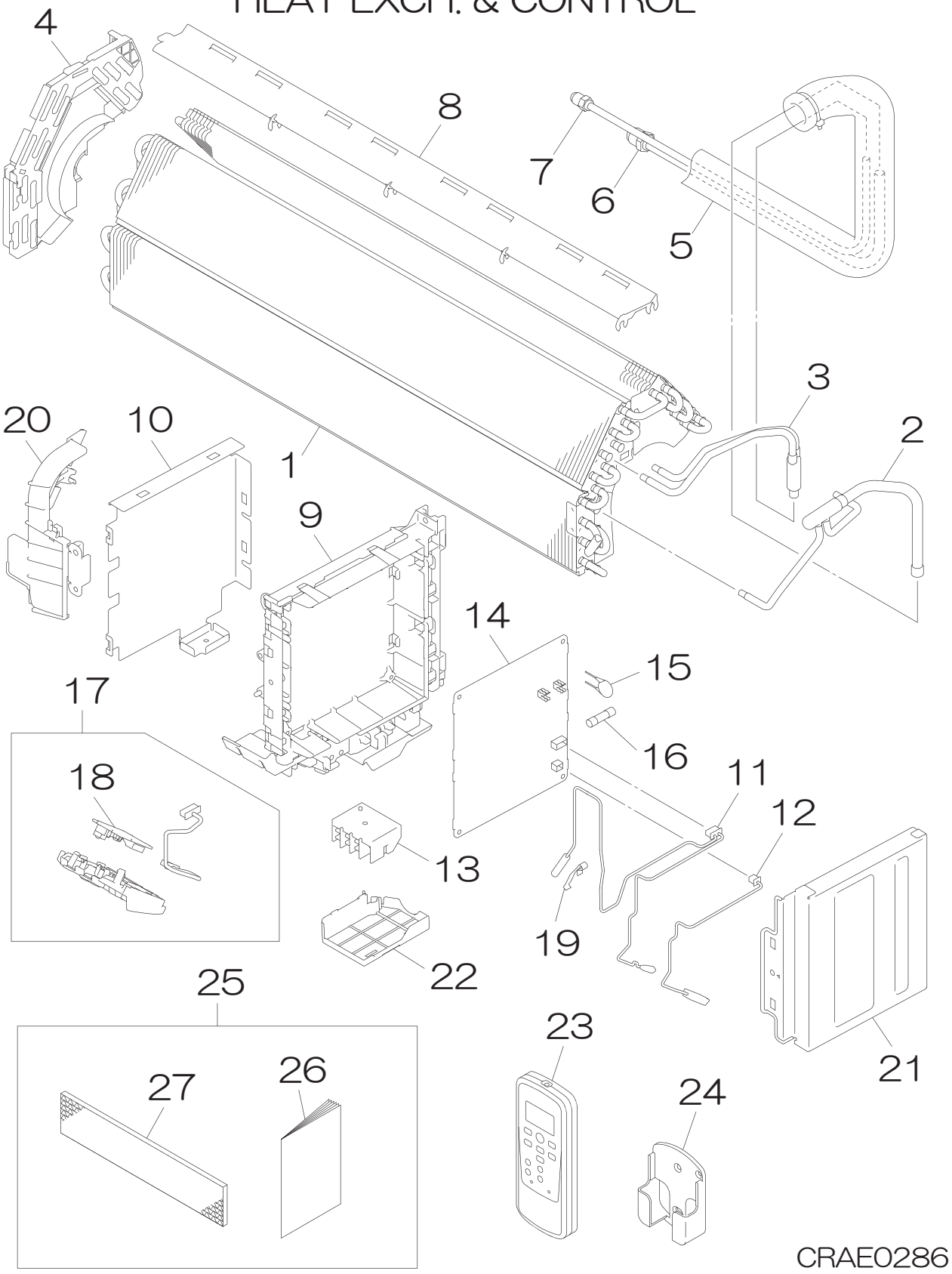


SRK13YN-S3, -S4, -S5, -S6, -S7

END ITEM NO. : RWA002F075BA, 075BB, 075BC, 075BD, 075BF

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～6	RLC 102A 001C	PANEL ASSY	1			1	1	1	2	
1	RLC 122A 002C	PANEL,FRONT	1			1	1	1	2	
2	RLC 437A 001	FILTER,AIR(TOP)	1			2	2	4	7	W623×D183(t14)
3	RLC 133A 002	PLATE,ORNAMENT	1			1	1	1	2	
4	RLA 129A 017	CAP	2			1	1	1	2	
5	RLC 011G 001	LABEL WIRING	1							
6	RLC 129A 008	HOLDER,FILTER	1							
7～14	RLC 435A 001	GRILLE ASSY,AIR OUT	1			1	1	2	3	
7	RLC 435A 002	GRILLE,AIR OUTLET	1			1	1	2	3	
8	RLC 436A 003	FLAP ASSY	1			1	1	2	2	
9・10	RLC 436A 004	LOUVER ASSY	2			1	1	2	2	
9	RLC 129A 009	PLATE,CONNECTING	2			1	1	1	2	
10	RLC 436A 002	LOUVER	10			1	1	2	2	
11	SSA 512T 096	MOTOR,STEPPING	1			1	1	1	2	FOR FLAP
12	SSA 423A 102	HOSE,DRAIN	1							
13	SSA 326A 047	PLUG	1							
14	RKS 504A 100	HARNESS ASSY	1			1	1	1	2	FOR FLAP MOTOR
15	RLC 111A 001	BASE ASSY	1			1	1	1	2	
16	RLC 129A 001	CASE,MOTOR(U)	1			1	1	1	2	
17	RLC 129A 002	CASE,MOTOR(L)	1			1	1	1	2	
18	SSA 923C 114	BEARING,PLANE	1			1	1	1	2	
19	SSA 431G 051	IMPELLER	1			1	1	2	4	
20	SSA 512T 127B	MOTOR,DC	1			1	1	1	2	FOR IMPELLER
21	RLC 032A 001	PLATE,INSTALLATION	1			1	1	1	2	
22	RLC 132A 001	LID	1			1	1	2	4	
23	SSA 913A 007	SCREW,TAP	2							4×14

HEAT EXCH. & CONTROL

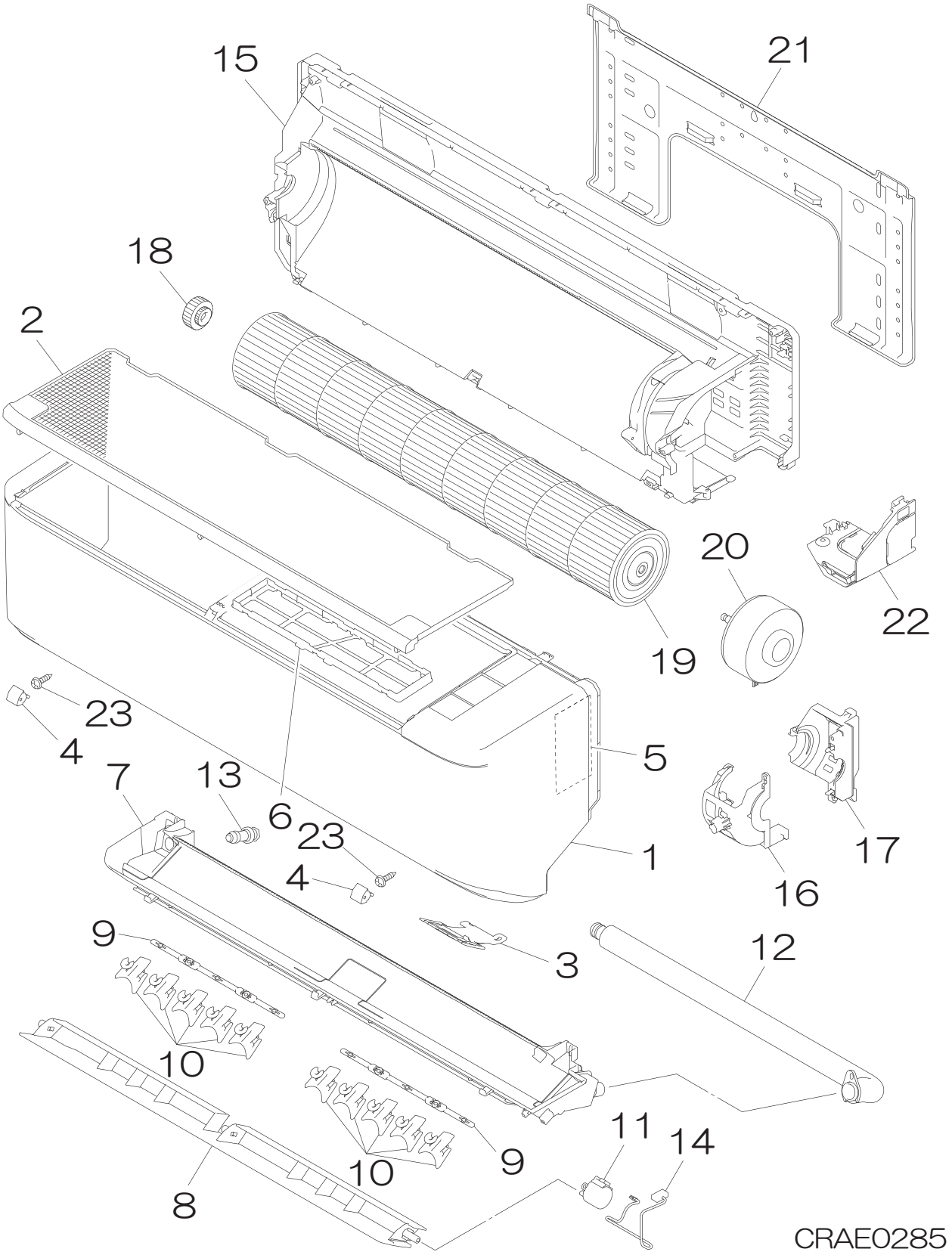


SRK13YN-S3, -S4, -S5, -S6, -S7

END ITEM NO. : RWA002F075BA, 075BB, 075BC, 075BD, 075BF

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～8	RLC 301A 001A	HEAT EXCH ASSY(AIR)	1			1	1	1	2	
2	RLC 315D 003	HEADER ASSY	1							
3	RLC 321A 038	PIPE ASSY(LIQUID)	1							
4	RLC 129A 003	BRACKET(L)	1			1	1	1	2	
5～7	RLC 321A 041	PIPE ASSY	1							
6	SSA 323F 088	UNION(SLD)	1							FOR GAS
7	SSA 323F 088A	UNION(SLD)	1							FOR LIQ.
8	RLC 129A 004	PLATE,BAFFLE	1							
9・10	RLC 142A 003	BOX ASSY,CONTROL	1							
9	RLC 142A 004	BOX ASSY,CONTROL	1							
10	RLC 132A 002	COVER,CONTROL	1							
11	SSA 551A 163L	SENSOR ASSY	1			1	1	2	4	INCL.SENSOR
12	SSA 551B 018	SENSOR(HUMIDITY)	1			1	1	2	4	
13	SSA 561B 702B	BLOCK,TERMINAL	1			1	1	2	2	T
14～16	RLC 505A 001D	PWB ASSY	1			2	2	4	8	
15	SSA 555B 050C	VARISTOR	1			1	1	1	2	Z
16	SSA 564A 132	FUSE(CURRENT)	1			1	1	1	2	F 3A
17	RLC 503A 001	DISPLAY ASSY	1			1	1	2	4	
18	RLC 505A 003	PWB ASSY(DISPLAY)	1			2	2	4	8	
19	RKJ 941F 001A	SPRING,LEAF	1							
20	RLC 129A 010	COVER,BEND	1							
21	RLC 142A 002	LID,CONTROL	1							
22	RLA 129A 023	COVER ASSY(TB)	1							
23	RKX 502A 001B	CONTROL ASSY,REMOTE	1			2	3	5	10	
24	RKN 032A 002C	HOLDER(REMO-CON)	1			1	1	1	2	
25	RLC 008A 002B	PARTS,STANDARD	1							FOR S3, S4, S5, S7
25	RLC 008A 002C	PARTS,STANDARD	1							FOR S6
26	RLC 012A 006A	MANUAL,INSTRUCTION	1							FOR S3, S4, S5, S7
26	RLC 012A 006	MANUAL,INSTRUCTION	1							FOR S6
27	RKT 437A 005	FILTER,LIGHT CLEAN	1							
(28)	RLC 011F 002BA	LABEL,MODEL NAME	1							FOR S3
(28)	RLC 011F 002BB	LABEL,MODEL NAME	1							FOR S4
(28)	RLC 011F 002BC	LABEL,MODEL NAME	1							FOR S5
(28)	RLC 011F 002BD	LABEL,MODEL NAME	1							FOR S6
(28)	RLC 011F 002BF	LABEL,MODEL NAME	1							FOR S7

PANEL & FAN ASSY

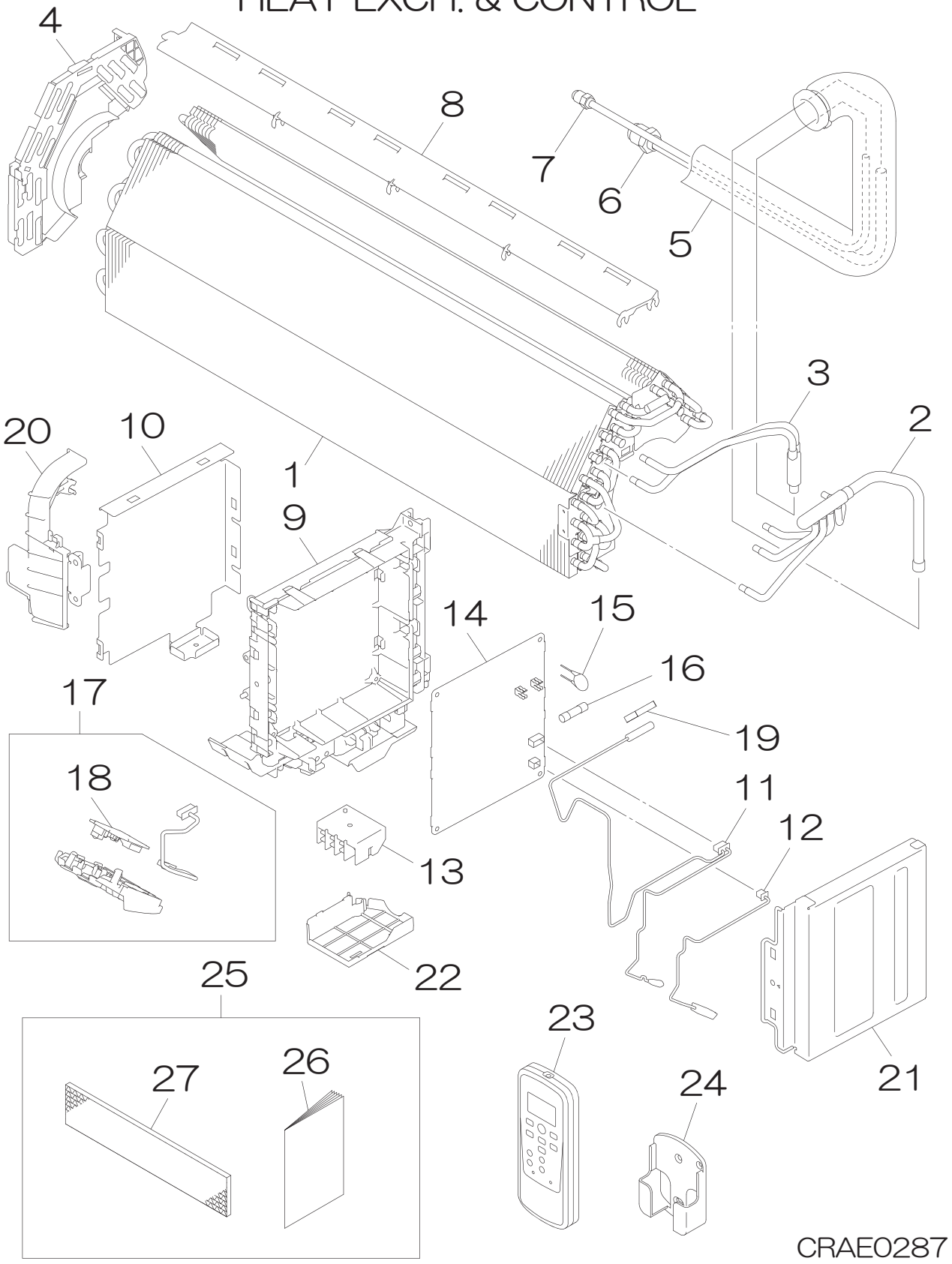


SRK18YN-S3, -S4, -S5, -S6, -S7

END ITEM NO. : RWA002F075CA, 075CB, 075CC, 075CD, 075CF

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～6	RLC 102A 001C	PANEL ASSY	1			1	1	1	2	
1	RLC 122A 002C	PANEL,FRONT	1			1	1	1	2	
2	RLC 437A 001	FILTER,AIR(TOP)	1			2	2	4	7	W623×D183(t14)
3	RLC 133A 002	PLATE,ORNAMENT	1			1	1	1	2	
4	RLA 129A 017	CAP	2			1	1	1	2	
5	RLC 011G 001	LABEL WIRING	1							
6	RLC 129A 008	HOLDER,FILTER	1							
7～14	RLC 435A 001	GRILLE ASSY,AIR OUT	1			1	1	2	3	
7	RLC 435A 002	GRILLE,AIR OUTLET	1			1	1	2	3	
8	RLC 436A 003	FLAP ASSY	1			1	1	2	2	
9・10	RLC 436A 004	LOUVER ASSY	2			1	1	2	2	
9	RLC 129A 009	PLATE,CONNECTING	2			1	1	1	2	
10	RLC 436A 002	LOUVER	10			1	1	2	2	
11	SSA 512T 096	MOTOR,STEPPING	1			1	1	1	2	FOR FLAP
12	SSA 423A 102	HOSE,DRAIN	1							
13	SSA 326A 047	PLUG	1							
14	RKS 504A 100	HARNESS ASSY	1			1	1	1	2	FOR FLAP MOTOR
15	RLC 111A 001	BASE ASSY	1			1	1	1	2	
16	RLC 129A 001	CASE,MOTOR(U)	1			1	1	1	2	
17	RLC 129A 002	CASE,MOTOR(L)	1			1	1	1	2	
18	SSA 923C 114	BEARING,PLANE	1			1	1	1	2	
19	SSA 431G 051	IMPELLER	1			1	1	2	4	
20	SSA 512T 127B	MOTOR,DC	1			1	1	1	2	FOR IMPELLER
21	RLC 032A 001	PLATE,INSTALLATION	1			1	1	1	2	
22	RLC 132A 001	LID	1			1	1	2	4	
23	SSA 913A 007	SCREW,TAP	2							4×14

HEAT EXCH. & CONTROL

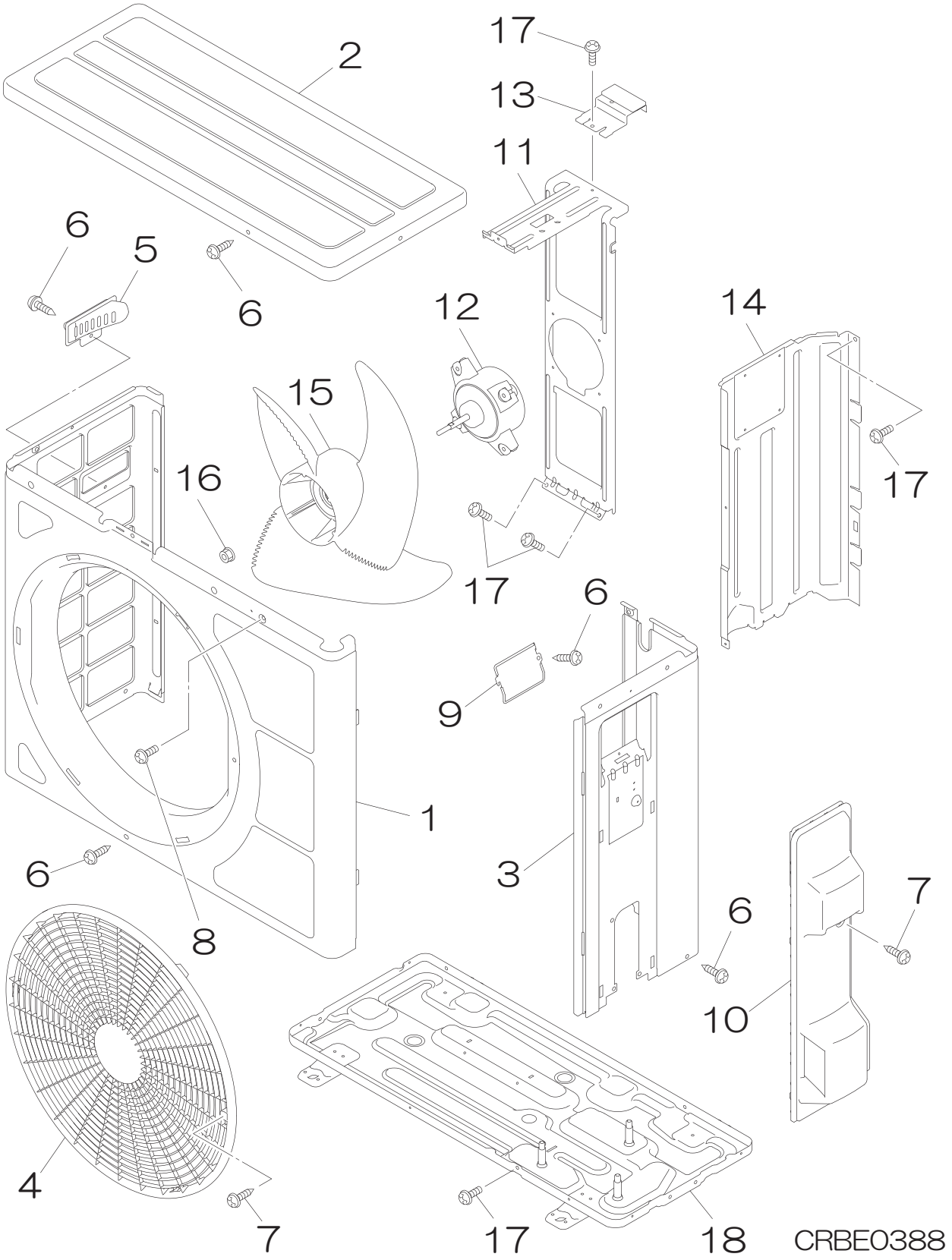


SRK18YN-S3, -S4, -S5, -S6, -S7

END ITEM NO. : RWA002F075CA, 075CB, 075CC, 075CD, 075CF

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～8	RLC 301A 005	HEAT EXCH ASSY(AIR)	1			1	1	1	2	
2	RLC 315D 001A	HEADER ASSY	1							
3	RLC 321A 053	PIPE ASSY(LIQUID)	1							
4	RLC 129A 003	BRACKET(L)	1			1	1	1	2	
5～7	RLC 321A 029A	PIPE ASSY	1							
6	SSA 323F 088B	UNION(SLD)	1							FOR GAS
7	SSA 323F 088A	UNION(SLD)	1							FOR LIQ.
8	RLC 129A 004	PLATE,BAFFLE	1							
9・10	RLC 142A 003	BOX ASSY,CONTROL	1							
9	RLC 142A 004	BOX ASSY,CONTROL	1							
10	RLC 132A 002	COVER,CONTROL	1							
11	SSA 551A 163L	SENSOR ASSY	1			1	1	2	4	INCL.SENSOR
12	SSA 551B 018	SENSOR(HUMIDITY)	1			1	1	2	4	
13	SSA 561B 702B	BLOCK,TERMINAL	1			1	1	2	2	T
14～16	RLC 505A 001F	PWB ASSY	1			2	2	4	8	
15	SSA 555B 050C	VARISTOR	1			1	1	1	2	Z
16	SSA 564A 132	FUSE(CURRENT)	1			1	1	1	2	F 3A
17	RLC 503A 001	DISPLAY ASSY	1			1	1	2	4	
18	RLC 505A 003	PWB ASSY(DISPLAY)	1			2	2	4	8	
19	RKJ 941F 001A	SPRING,LEAF	1							
20	RLC 129A 010A	COVER,BEND	1							
21	RLC 142A 002	LID,CONTROL	1							
22	RLA 129A 023	COVER ASSY(TB)	1							
23	RKX 502A 001B	CONTROL ASSY,REMOTE	1			2	3	5	10	
24	RKN 032A 002C	HOLDER(REMO-CON)	1			1	1	1	2	
25	RLC 008A 002B	PARTS,STANDARD	1							FOR S3, S4, S5, S7
25	RLC 008A 002C	PARTS,STANDARD	1							FOR S6
26	RLC 012A 006A	MANUAL,INSTRUCTION	1							FOR S3, S4, S5, S7
26	RLC 012A 006	MANUAL,INSTRUCTION	1							FOR S6
27	RKT 437A 005	FILTER,LIGHT CLEAN	1							
(28)	RLC 011F 002CA	LABEL,MODEL NAME	1							FOR S3
(28)	RLC 011F 002CB	LABEL,MODEL NAME	1							FOR S4
(28)	RLC 011F 002CC	LABEL,MODEL NAME	1							FOR S5
(28)	RLC 011F 002CD	LABEL,MODEL NAME	1							FOR S6
(28)	RLC 011F 002CF	LABEL,MODEL NAME	1							FOR S7

PANEL & FAN ASSY

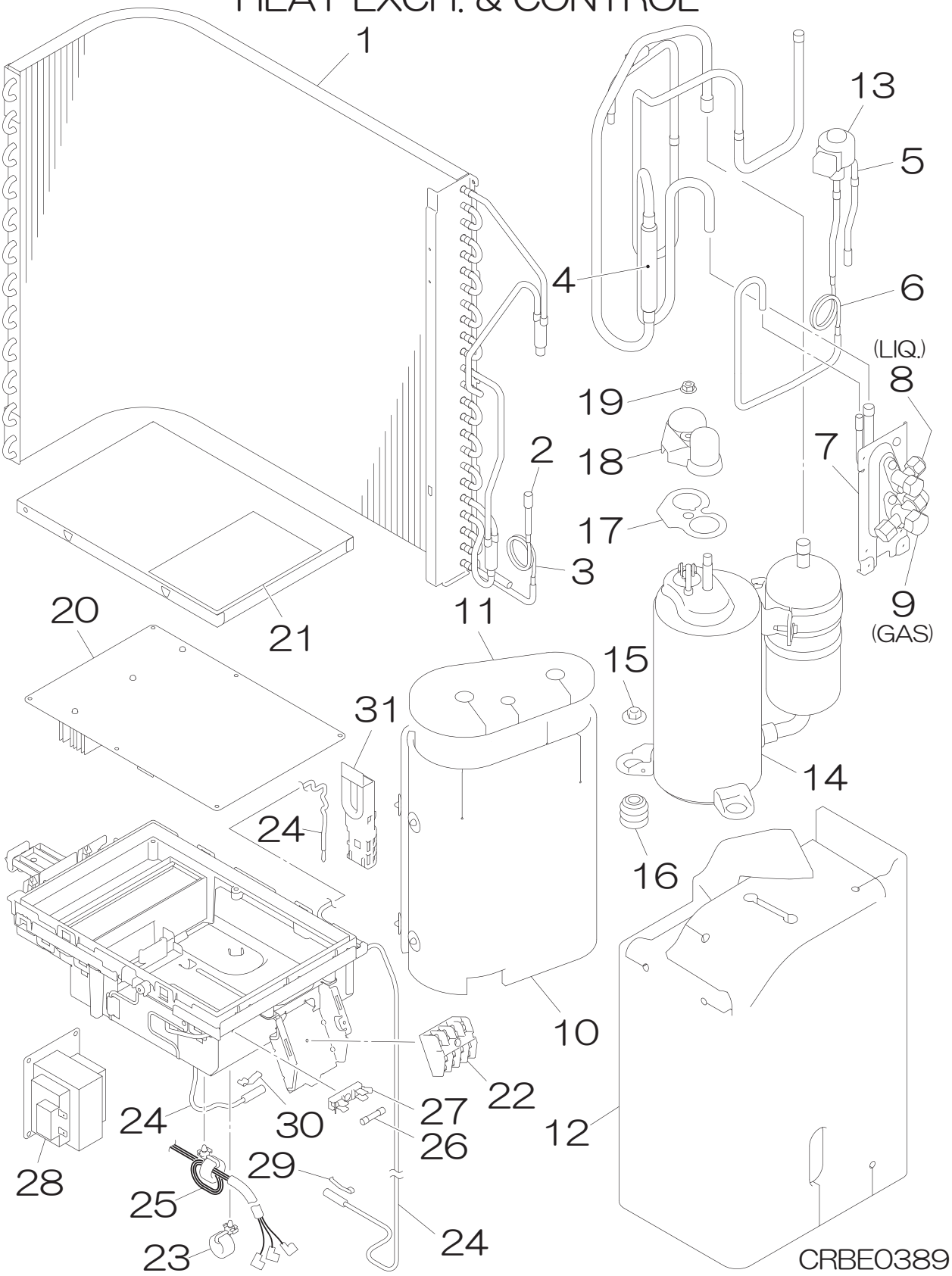


SRC10YN-S3, -S4, -S5, -S6, -S7

END ITEM NO. : RWC003F096AA, 096AB, 096AC, 096AD, 096AF

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1	RCW 122A 002	PANEL,FRONT	1			1	1	1	2	
2	RCW 124A 002	PANEL,TOP	1			1	1	1	2	
3	RCW 123A 003	PANEL ASSY,SIDE(R)	1			1	1	1	2	
4	RCW 435A 001	GRILLE,AIR OUTLET	1			1	1	2	3	
5	SSA 944B 036B	HANDLE	1							
6	SSA 913A 034F	SCREW,TAP	17							4×8
7	SSA 913A 034G	SCREW,TAP	2							4×12
8	SSA 913A 008F	SCREW,TAP	1							4×10
9	RCW 142A 007	COVER(TB)	1			1	1	2	4	
10	RCW 132A 002	COVER ASSY,SERVICE	1			1	1	1	2	
11	RCW 116A 008	BRACKET ASSY,MOTOR	1							
12	SSA 512T 094	MOTOR,DC	1			1	1	1	2	
13	RCW 116A 007	BRACKET ASSY	1							
14	RCW 141A 001A	PLATE,BAFFLE	1							
15	SSA 431B 258	PROPELLER	1			1	1	2	4	
16	SSA 914B 007AC	NUT,TH	1							
17	W011D04X008	TAP-SCREW,CRS-TRS 2	5							4×8
18	RCW 111A 003	BASE ASSY	1			1	1	1	2	

HEAT EXCH. & CONTROL

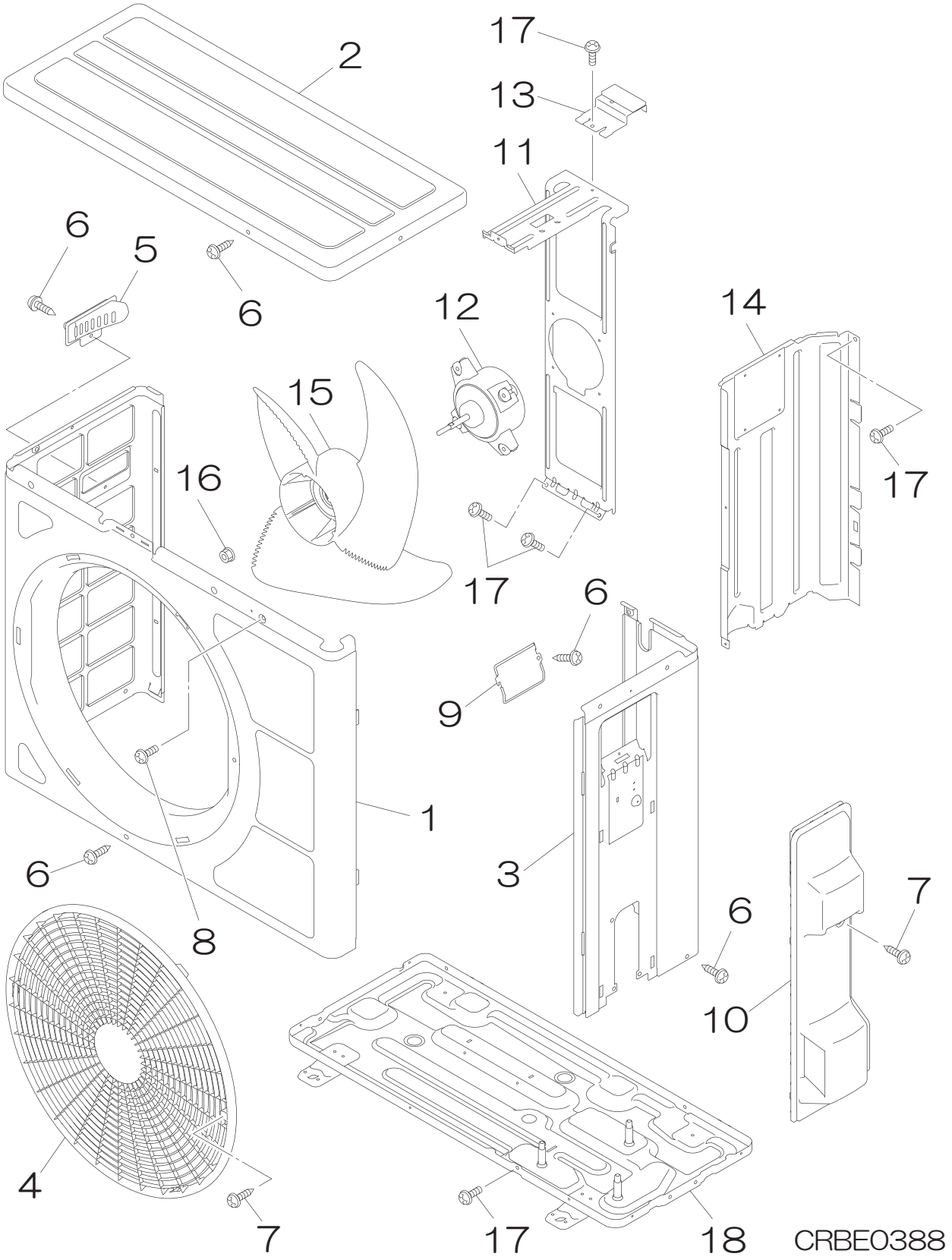


SRC10YN-S3, -S4, -S5, -S6, -S7

END ITEM NO. : RWC003F096AA, 096AB, 096AC, 096AD, 096AF

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～3	RCW 301A 005	HEAT EXCH ASSY(AIR)	1			1	1	1	2	
2・3	RCW 321A 008	PIPE ASSY	1							
3	RCV 315B 202A	CAPILLARY	1							Φ2.6×Φ3.6 L300
4	RCW 321A 047	PIPING ASSY(SUCTION)	1							
5・6	RCW 304A 004	PIPING ASSY(EXPAN)	1			1	1	1	2	
5	SSA 387F 051	VALVE,BODY(EXP)	1			1	1	1	2	EEV
6	RCV 315B 202	CAPILLARY	1							Φ2.6×Φ3.6 L300
7	RCW 116A 002	BRACKET(VALVE)	1							
8	RCW 381A 001	VALVE,SERVICE(1/4")	1			1	1	1	2	LIQ.
9	RCW 381A 002	VALVE,SERVICE(3/8")	1			1	1	1	2	GAS
10	RCW 154D 001	INSULATION,COMP	1							
11	RCW 154D 002	INSULATION,COMP	1							
12	RCW 154D 003	INSULATION	1							
13	SSA 382F 210L	COIL,SOLENOID	1			1	1	1	2	FOR EEV
14	AHT 201A 864DV	COMPRESSOR ASSY	1			1	2	3	8	RM-B5077MDE5
15	SSA 914C 013A	NUT,FLANGE	3							
16	SSA 941C 346A	CUSHION,RUBBER	3							
17	RSA 932C 004	GASKET,COVER	1							
18	RSA 947K 005	COVER,TERMINAL	1			1	1	2	4	
19	SSA 914C 016	NUT,FLANGE	1							
20	RCW 505A 001C	PWB ASSY	1			2	2	4	8	
21	RMC 011G 007A	LABEL,WIRING	1							
22	SSA 561B 723	BLOCK,TERMINAL	1			1	1	2	2	
23	SSA 554D 173	CORE,FERRITE	1							
24	SSA 551A 239B	SENSOR ASSY	1			1	1	2	4	
25	RCW 504A 001A	WIRING ASSY	1							FOR COMP.
26	SSA 564A 136	FUSE(CURRENT)	1			1	1	1	2	F 15A
27	SSA 564B 088	HOLDER,FUSE	1			1	1	1	2	
28	SSA 554B 099A	REACTOR	1			1	1	1	2	
29	RKF 941F 002	SPRING,LEAF	1							FOR HEAT EXCH PIPE SENSOR
30	RCJ 941F 001	SPRING,LEAF	1							FOR DISCHARGE PIPE SENSOR
31	RCV 129A 001A	HOLDER,SENSOR	1							
(32)	RMC 011F 021BM	LABEL,MODEL NAME	1							FOR S3
(32)	RMC 011F 021BN	LABEL,MODEL NAME	1							FOR S4
(32)	RMC 011F 021BP	LABEL,MODEL NAME	1							FOR S5
(32)	RMC 011F 021BR	LABEL,MODEL NAME	1							FOR S6
(32)	RMC 011F 021DH	LABEL,MODEL NAME	1							FOR S7

PANEL & FAN ASSY

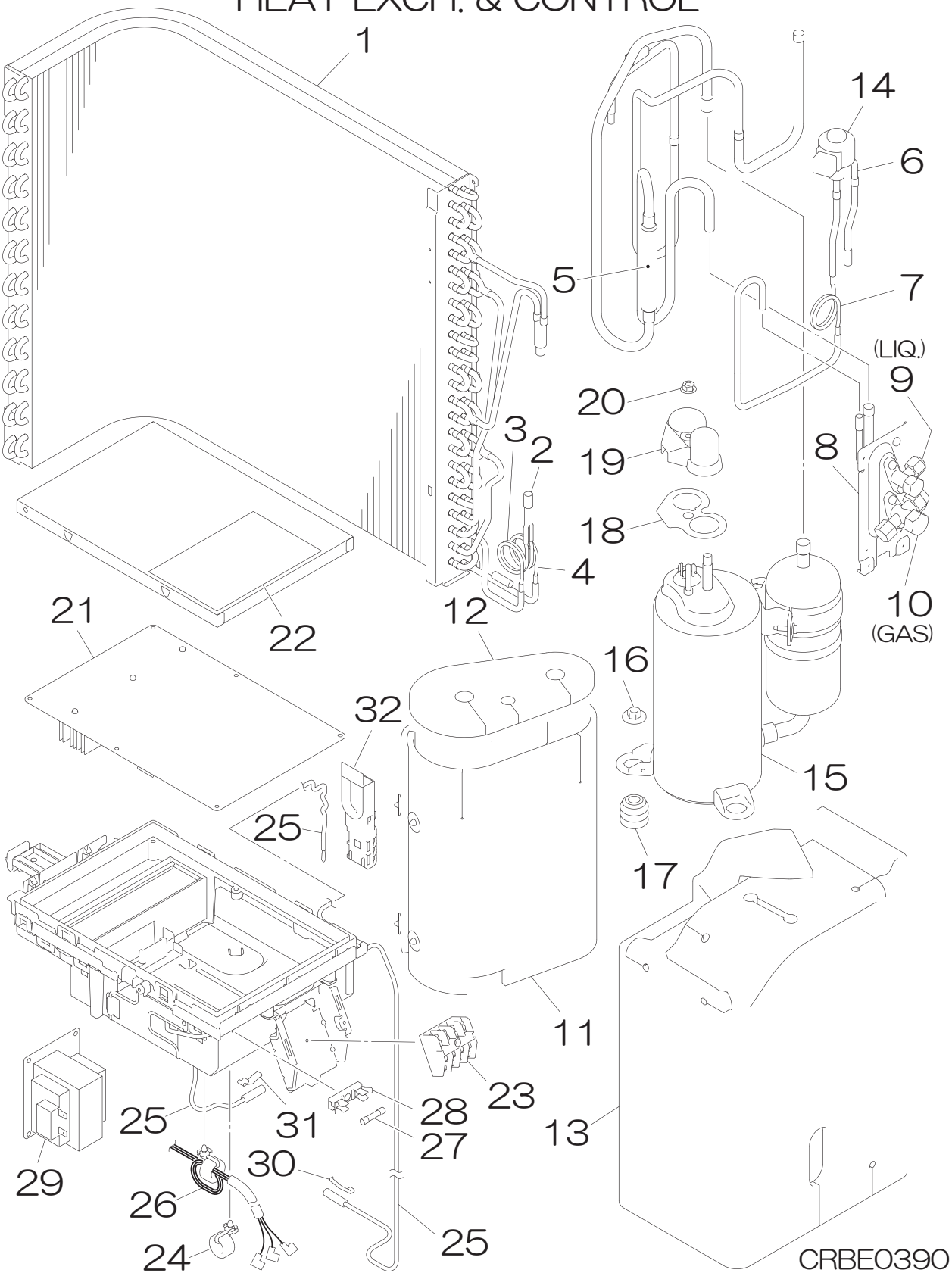


SRC13YN-S3, -S4, -S5, -S6, -S7

END ITEM NO. : RWC003F096BA, 096BB, 096BC, 096BD, 096BF

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1	RCW 122A 002	PANEL,FRONT	1			1	1	1	2	
2	RCW 124A 002	PANEL,TOP	1			1	1	1	2	
3	RCW 123A 003	PANEL ASSY,SIDE(R)	1			1	1	1	2	
4	RCW 435A 001	GRILLE,AIR OUTLET	1			1	1	2	3	
5	SSA 944B 036B	HANDLE	1							
6	SSA 913A 034F	SCREW,TAP	17							4×8
7	SSA 913A 034G	SCREW,TAP	2							4×12
8	SSA 913A 008F	SCREW,TAP	1							4×10
9	RCW 142A 007	COVER(TB)	1			1	1	2	4	
10	RCW 132A 002	COVER ASSY,SERVICE	1			1	1	1	2	
11	RCW 116A 008	BRACKET ASSY,MOTOR	1							
12	SSA 512T 094	MOTOR,DC	1			1	1	1	2	
13	RCW 116A 007A	BRACKET ASSY	1							
14	RCW 141A 001A	PLATE,BAFFLE	1							
15	SSA 431B 258	PROPELLER	1			1	1	2	4	
16	SSA 914B 007AC	NUT,TH	1							
17	W011D04X008	TAP-SCREW,CRS-TRS 2	5							4×8
18	RCW 111A 003	BASE ASSY	1			1	1	1	2	

HEAT EXCH. & CONTROL

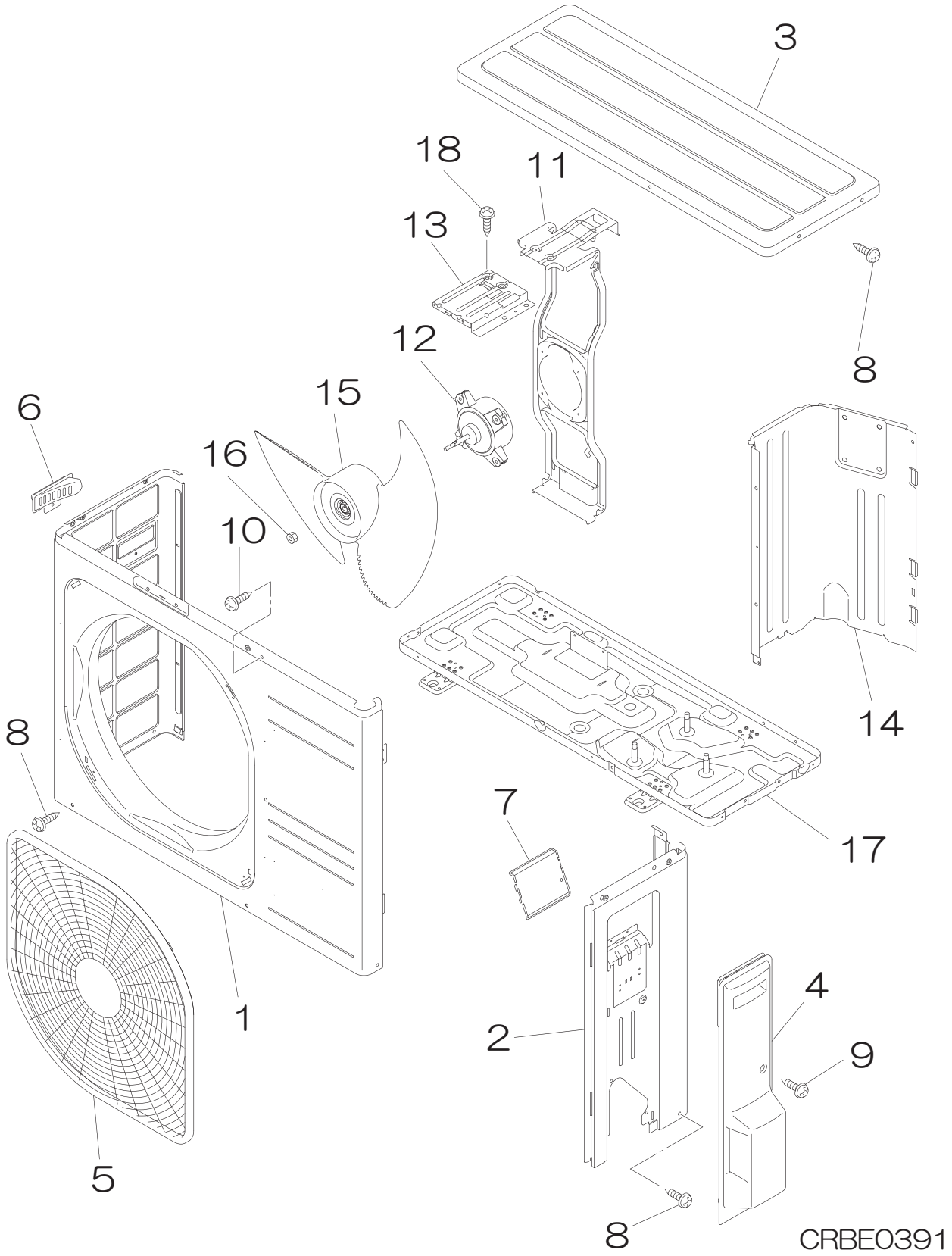


SRC13YN-S3, -S4, -S5, -S6, -S7

END ITEM NO. : RWC003F096BA, 096BB, 096BC, 096BD, 096BF

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～4	RCW 301A 007	HEAT EXCH ASSY(AIR)	1			1	1	1	2	
2～4	RCW 321A 029	PIPE ASSY	1							
3	RCV 315B 202	CAPILLARY	1							Φ2.6×Φ3.6 L300
4	RCV 315B 202A	CAPILLARY	1							Φ2.6×Φ3.6 L300
5	RCW 321A 047	PIPING ASSY(SUCTION)	1							
6・7	RCW 304A 004	PIPING ASSY(EXPAN)	1			1	1	1	2	
6	SSA 387F 051	VALVE,BODY(EXP)	1			1	1	1	2	EEV
7	RCV 315B 202	CAPILLARY	1							Φ2.6×Φ3.6 L300
8	RCW 116A 002	BRACKET(VALVE)	1							
9	RCW 381A 001	VALVE,SERVICE(1/4")	1			1	1	1	2	LIQ.
10	RCW 381A 002	VALVE,SERVICE(3/8")	1			1	1	1	2	GAS
11	RCW 154D 001	INSULATION,COMP	1							
12	RCW 154D 002	INSULATION,COMP	1							
13	RCW 154D 003	INSULATION	1							
14	SSA 382F 210L	COIL,SOLENOID	1			1	1	1	2	FOR EEV
15	AHT 201A 864DV	COMPRESSOR ASSY	1			1	2	3	8	RM-B5077MDE5
16	SSA 914C 013A	NUT,FLANGE	3							
17	SSA 941C 346A	CUSHION,RUBBER	3							
18	RSA 932C 004	GASKET,COVER	1							
19	RSA 947K 005	COVER,TERMINAL	1			1	1	2	4	
20	SSA 914C 016	NUT,FLANGE	1							
21	RCW 505A 001C	PWB ASSY	1			2	2	4	8	
22	RMC 011G 007A	LABEL,WIRING	1							
23	SSA 561B 723	BLOCK,TERMINAL	1			1	1	2	2	
24	SSA 554D 173	CORE,FERRITE	1							
25	SSA 551A 239B	SENSOR ASSY	1			1	1	2	4	
26	RCW 504A 001A	WIRING ASSY	1							FOR COMP.
27	SSA 564A 136	FUSE(CURRENT)	1			1	1	1	2	F 15A
28	SSA 564B 088	HOLDER,FUSE	1			1	1	1	2	
29	SSA 554B 099A	REACTOR	1			1	1	1	2	
30	RKF 941F 002	SPRING,LEAF	1							FOR HEAT EXCH PIPE SENSOR
31	RCJ 941F 001	SPRING,LEAF	1							FOR DISCHARGE PIPE SENSOR
32	RCV 129A 001A	HOLDER,SENSOR	1							
(33)	RMC 011F 021BS	LABEL,MODEL NAME	1							FOR S3
(33)	RMC 011F 021BT	LABEL,MODEL NAME	1							FOR S4
(33)	RMC 011F 021BV	LABEL,MODEL NAME	1							FOR S5
(33)	RMC 011F 021BW	LABEL,MODEL NAME	1							FOR S6
(33)	RMC 011F 021DJ	LABEL,MODEL NAME	1							FOR S7

PANEL & FAN ASSY

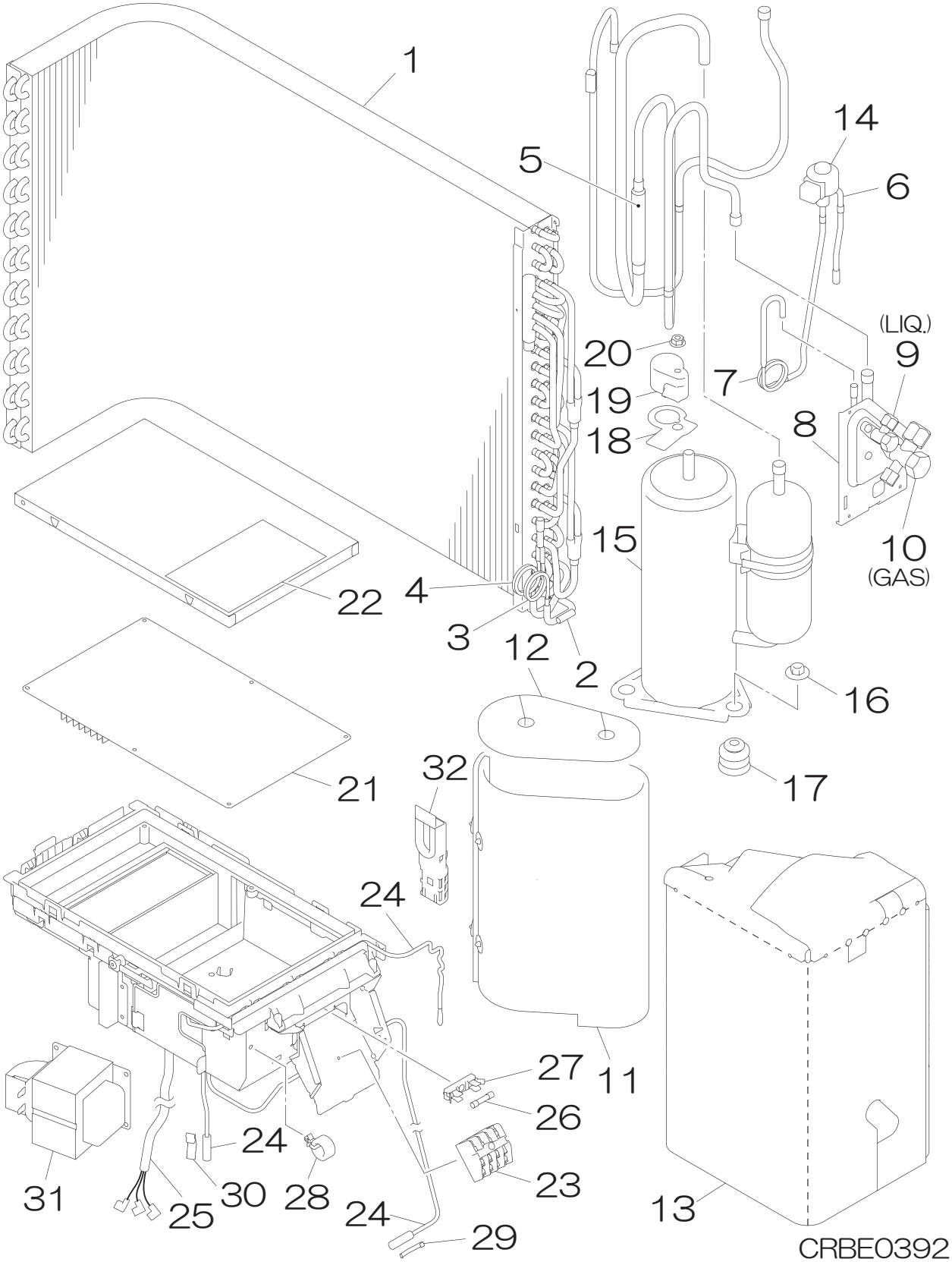


SRC18YN-S3, -S4, -S5, -S6, -S7

END ITEM NO. : RWC003F097AA, 097AB, 097AC, 097AD, 097AF

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1	RCV 122A 002	PANEL,FRONT	1			1	1	1	2	
2	RCV 123A 005B	PANEL ASSY,SIDE(R)	1			1	1	1	2	
3	RCV 124A 001	PANEL,TOP	1			1	1	1	2	
4	RCV 132A 004	COVER ASSY,SERVICE	1			1	1	1	2	
5	RCV 435A 001A	GRILLE,AIR OUTLET	1			1	1	1	2	
6	SSA 944B 036B	HANDLE	1							
7	RCV 142A 001	COVER(TB)	1			1	1	2	4	
8	SSA 913A 034F	SCREW,TAP	25							4×8
9	SSA 913A 034G	SCREW,TAP	1							4×12
10	SSA 913A 008F	SCREW,TAP	1							4×10
11	RCV 116A 006	BRACKET ASSY	1							
12	SSA 512T 094	MOTOR,DC	1			1	1	1	2	
13	RCV 116A 003	BRACKET,MOTOR(U)	1							
14	RCW 141A 002	PLATE,BAFFLE	1							
15	SSA 431B 253	PROPELLER	1			1	1	2	4	
16	SSA 914B 007AC	NUT,TH	1							
17	RCV 111A 001F	BASE ASSY	1			1	1	1	2	
18	W011D04X008	TAP-SCREW,CRS-TRS 2	6							4×8

HEAT EXCH. & CONTROL



SRC18YN-S3, -S4, -S5, -S6, -S7

END ITEM NO. : RWC003F097AA, 097AB, 097AC, 097AD, 097AF

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～4	RCV 301A 204A	HEAT EXCH ASSY(AIR)	1			1	1	1	2	
2～4	RCV 321A 273	PIPE ASSY	1							
3	RCV 315B 202	CAPILLARY	1							Φ2.6×Φ3.6 L300
4	RCV 315B 202A	CAPILLARY	1							Φ2.6×Φ3.6 L300
5	RCV 321A 088	PIPING ASSY(SUCTION)	1							
6・7	RCV 304A 205	PIPING ASSY(EXPAN)	1			1	1	1	2	
6	SSA 387F 051	VALVE,BODY(EXP)	1			1	1	1	2	EEV
7	RCV 315B 202A	CAPILLARY	1							Φ2.6×Φ3.6 L300
8	RCS 116A 004	BRACKET,VALVE	1							
9	RCS 381A 004B	VALVE,SERVICE(1/4")	1			1	1	1	2	LIQ.
10	RCV 381A 002	VALVE,SERVICE(1/2")	1			1	1	1	2	GAS
11	RCV 154D 202	INSULATION,COMP	1							
12	RCV 154D 003	INSULATION,COMP	1							
13	RCV 154D 203	INSULATION	1							
14	SSA 382F 210AY	COIL,SOLENOID	1			1	1	1	2	FOR EEV
15	RSA 201A 038	COMPRESSOR ASSY	1			1	2	3	8	
16	SSA 914C 013A	NUT,FLANGE	3							
17	RMC 941C 003	CUSHION,RUBBER	3							
18	RSA 932C 009	GASKET,COVER	1							
19	RSA 947K 009	COVER,TERMINAL	1			1	1	2	4	
20	SSA 914C 016	NUT,FLANGE	1							
21	RCV 505A 101CB	PWB ASSY	1			2	2	4	8	
22	RMC 011G 007A	LABEL,WIRING	1							
23	SSA 561B 723	BLOCK,TERMINAL	1			1	1	2	2	
24	SSA 551A 239A	SENSOR ASSY	1			1	1	2	4	
25	RCV 504A 001	WIRING ASSY	1							FOR COMP.
26	SSA 564A 136	FUSE(CURRENT)	1			1	1	1	2	F 15A
27	SSA 564B 088	HOLDER,FUSE	1			1	1	1	2	
28	SSA 554D 173	CORE,FERRITE	1							
29	RKF 941F 002	SPRING,LEAF	1							FOR HEAT EXCH PIPE SENSOR
30	RCJ 941F 001	SPRING,LEAF	1							FOR DISCHARGE PIPE SENSOR
31	SSA 554B 112	REACTOR	1			1	1	1	2	
32	RCV 129A 001A	HOLDER,SENSOR	1							
(33)	RMC 011F 021BY	LABEL,MODEL NAME	1							FOR S3
(33)	RMC 011F 021BZ	LABEL,MODEL NAME	1							FOR S4
(33)	RMC 011F 021CA	LABEL,MODEL NAME	1							FOR S5
(33)	RMC 011F 021CB	LABEL,MODEL NAME	1							FOR S6
(33)	RMC 011F 021DK	LABEL,MODEL NAME	1							FOR S7

RESIDENTIAL AIR-CONDITIONING TECHNICAL MANUAL & PARTS LIST

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